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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

SEPTEMBER, 1950

San Carlos, Calif., Fire Fighters Dash for Cover as Chemicals Explode during Warehouse Fire.

A CASE - SHEPPERD - MANN PUBLICATION

WHY

1. Simplicity In asphyxial emergencies speed saves lives and simplicity means speed. Emersons have it. Turn on the oxygen, move one lever and apply the mask.

2. Safety The pressures are effective, yet have never harmed a lung, not even a baby's. They are approved by the American Medical Association — and are not adjustable. ★ More oxygen is brought to the lungs than by manual artificial respiration, yet there is no bodily pressure to endanger an injured or burned person. ★ The Emerson Resuscitator mounted in the carrying case has separate passageways throughout the mechanism for inhaled oxygen and exhaled gases (a feature covered by U. S. Patent No. 2268172). ★ The case sets flat and won't topple, even if an extension hose is tugged.

3. Efficiency Is it important that your Emerson runs longer on a given quantity of oxygen? Far out on a beach or at some other remote place this factor may save a life.

4. Quality Workmanship and materials throughout are superlative, guaranteed by the factory (for two years) and checked by our representatives throughout the United States and Canada.

5. Adaptability Standard models can be adapted for *dual*, *triple*, or *quadruple* use. ★ Extension hoses can be used to give full protection 400 feet or more away from the parent machine, complete with *aspirator* (as well as *resuscitator* and *inhalator* functions). ★ Large cylinders can be hooked up, for long cases, by using a flexible connector. ★ Small cylinders can be changed with one hand by a man who is holding the mask on a patient's face with the other.

EMERSON Resuscitators

are TRUSTED IN EMERGENCIES

"Simplest and Safest"

Such Advantages Mount Up

They Can Help You Save Lives

Write for complete details and Medical References

J. H. EMERSON CO.

22 COTTAGE PARK AVE., CAMBRIDGE 40, MASS.

PACKED WITH POWER

500 gallon, 2 stage, centrifugal pumper with high pressure booster equipment for approximately 600 lbs. pressure. Booster tank is 400 gallons. Chassis is 1950 Diamond T with 131 H.P. Engine and 166-inch wheel base

Protected by **FEDERAL SIGNALS**

Modern fire apparatus is packed with power to cope with any emergency. This power must be fully protected by the finest in warning signal equipment. Federal signals establish a zone of safety, a warning area of light and sound that precede the vehicle, alerting all in its path.

The warning equipment shown consists of a Federal 78 double-tone siren with Propello-Ray light, matching Propello-Ray light on the opposite fender and the famous Beacon-Ray "Fireball" light on the roof.

In specifying Federal signals you are putting your trust in a company that is always first with the finest, a company whose engineers are constantly on the alert for new and improved ways of protecting life and property.

Write today **FOR EMERGENCY VEHICLE SIGNAL BULLETIN**

Specify **A FEDERAL COASTER SIREN and A BEACON-RAY LIGHT FOR ALL *NEW* APPARATUS**

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Preparedness!

WHETHER we call it that or not, the nation is at war. Tomorrow may see the fire service in the very front line of defense. The President has asked for unprecedented regulatory powers and taxes. At the same time the Government is placing large orders for air crash fire equipment with American fire apparatus manufacturers. In its recommendations for civilian protection the fire service calls for a staggering total of fire trucks, for millions of feet of large hose, for radio communications facilities on a vast scale, and much more!

● For months FIRE ENGINEERING has been warning its readers to get busy—to survey their needs—and place their orders for needed facilities. Now, we say: don't count on government support—only a few target areas will receive this help. Yet you must step up protection to meet stepped-up production, transportation, storage and other war hazards. The number and severity of fires will increase as war effort increases. And there is always the dread threat of sabotage.

● *It is a time for action in the fire service.* Once more we say it—check and double check your needs, Chief. Make them known to your local government,—yes, and to your patriotic citizens. Get those orders in to bring your fire forces up to strength. And, as the fire service has done through previous war emergencies,—look to, look into—and count upon the editorial and advertising content of FIRE ENGINEERING for sound support!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage and Industrial Wastes Engineering,* etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1950, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

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"Specialized Leadership"

Borough of Irwin

Irwin, Pennsylvania

PHONE 97

CHARLES C. EICHENBERG
BURGESS

CHARLES E. TOWNSLEY
CHIEF OF POLICE

June 23, 1950

Herbst-Bandel Associates, Sales Rep.
Fabric Fire Hose Company
Pittsburgh, Pa.

Gentlemen:-

We thought you would like to know of the exceptional service we received from the use of Keystone Brand Fabric Fire Hose.

After twenty-one (21) years of constant fire department service, we turned some of this hose over to our Street Department for flushing streets and sewers and on a recent occasion it was necessary to opon a clogged sewer and the fire hose that we have had in service for twenty-one years was used and withstood a pressure of 160# and still inservice in our Street Department.

We are pleased to give you the above report; as in our opinion KEYSTONE BRAND FABRIC FIRE HOSE has delivered wonderful service and we can't speak too highly of your product.

Respectfully yours,
James A Gilchrist
James A. Gilchrist,
BOROUGH HOSE FOREMAN

G/N.

UNSOLICITED

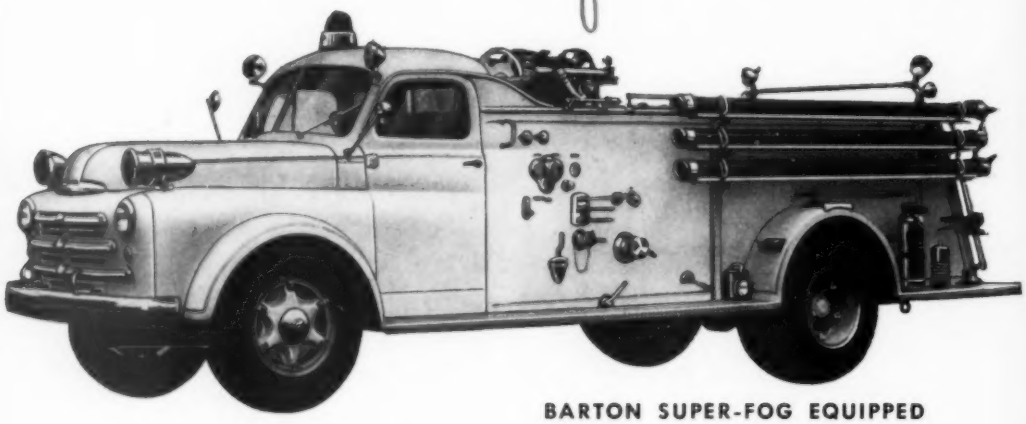
• KEYSTONE •

FULL CABLED FULL TWILL WOVEN GENUINE WAX AND PARA GUM TREATED HEAVY DUTY FIRE HOSE

FABRIC FIRE HOSE CO.
SANDY HOOK, CONN.
1869 1950

American of BATTLE CREEK

FIRE APPARATUS fire trucks



BARTON SUPER-FOG EQUIPPED

Dependable service . . . assurance of positive action . . . nothing means more to the fireman. Over 25 years of experience and research in keeping with the progress of the automotive industry and fire fighting methods has given American Fire Apparatus the answer to producing a dependable fire truck ahead of all others.

The above equipment is typical of the many fire trucks produced by this company. It can be built on your favorite chassis with one of the many models of Barton-American front or midship mounted fire pumps to meet your specifications.

As we are a division of American-Marsh Pumps, Inc., one of the largest pump manufacturers making fire pumps, we can give you undivided responsibility.

We have active sales representatives throughout the country that would be glad to call on you and give you further information. Write to our plant in Battle Creek and we will give you the name of our representative in your territory.

*Div. American-Marsh Pumps, Inc.

CHECK THESE OUTSTANDING FEATURES . . .

- Panel Controlled Discharge Gate Valves (Including position lock feature.)
- Frost Proof Outlet Valve
- Frost Proof Drain System
- Vacuum Power Clutch and Gear Shift Control (Pump goes into immediate action by turning a switch.)
- Electric Brake Lock
- Electric Rewind Hose Reels
- Barton Super-fog Guns (Straight streams or long or short range fog.)
- Water Tank Level Indicator (Indicator showing water level can be seen from all angles.)
- Flat Booster Tank With Patented Rear Filler
- Dual Battery System
- Dual Priming System
- Front or Midship Pump (To 850# pressure — midship model.)
- High and Low Pressure Streams simultaneously — midship model.

American FIRE APPARATUS*

BATTLE CREEK, MICHIGAN

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

New coat one pound lighter—costs no more

THIS new coat can take a load off your shoulders—one pound lighter and more comfortable, too. Rubber, seams, lining—all have new strength to make this coat stand rough service, years of wear. It's the new B. F. Goodrich fleece-lined "Fire King" fireman's coat.

New comfort in coats—One pound lighter than ordinary fleece-lined fireman's coats. Adjustable collar is corduroy, soft, not scratchy or irritating. Fly front is 8 inches wide. Each snap riveted to coat in four places. D-ring type snap makes a secure lock, yet releases easily.

Sleeves have outside seams, extending from end of sleeve to collar, allow more freedom of arm movement. Sleeves won't buckle when arm is bent. Large, roomy inside pocket can't catch or snag.

Rubber wristlets—No fabric to soak or loosen. Wristlets are all-rubber, waterproof. Keep water from getting inside sleeves, lengthening life of lining. Eliminate possibility of wrist irritations from scratching materials.

Vulcanized seams—Sections of this new B. F. Goodrich coat are first cemented together, then strapped, hand rolled, then vulcanized. No stitches to break under strain. The bond between sections is leakproof. Points of stress are reinforced with rubber tape vulcanized to the seams.

Stands rough treatment—Under tests that pull and jerk coats 1,000 times on a machine, ordinary coats broke and split; the B. F. Goodrich Fire King coat showed no separation. Under constant water pressure, this new coat showed no damage after 30 minutes, while ordinary coats failed in two minutes.

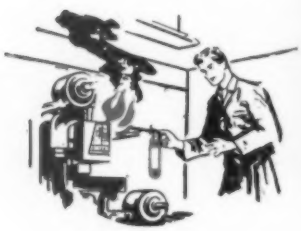
Your local BFG distributor can now supply your department with this new Fire King coat. Ask him to bring one around for a demonstration. Try it on, see how it's made, how it feels. No increase in price for these added features. If you don't know your BFG distributor, write for name and address: *The B.F.Goodrich Company, Industrial and General Products Division, Akron, Ohio.*

B.F.Goodrich
RUBBER FOR INDUSTRY

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

Safety First Safe-T-meter

THE SENSATIONAL NEW LINE OF HAND PORTABLE, DRY CHEMICAL FIRE EXTINGUISHERS THAT OFFERS POSITIVE ON-THE-SPOT FIRE PROTECTION!



The exclusive Safe-T-Meter gauge tells you at a glance it's Ready To Go!
KEEP TOP END UP WHILE USING
Safety First
Safe-T-meter 2½
DRY CHEMICAL FIRE EXTINGUISHER
RECHARGE IMMEDIATELY AFTER USE TO RECHARGE
MAINTENANCE
SAFETY FIRST CO
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Underwriters Laboratories Inc.
DRY CHEMICAL HAND FIRE EXTINGUISHER
CLASSIFICATION B 2 C 2

SAFE-T-METER FEATURES!

B-2, C-2 Underwriters' Rating, Pressure Gauge Tells Status Of Extinguisher At A Glance, Can Be Used Intermittently, On-The-Spot Refilling, No Tools Required

NEW RECHARGE CYLINDER MAKES PRESSURIZING EASY!

Just follow simple directions on recharge cylinder label... no tools or technical knowledge is needed. When cylinder is expended return to your Safe-T-Meter dealer for replacement.

Write also for information concerning the complete line of Safety First Industrial Dry Chemical Extinguishers.

Ranging in size from 5 lbs. to 30 lbs., there is an extinguisher to fit your every need!

Now, for the first time, Safe-T-Meter, Safety First's revolutionary, new visual gauge fire extinguisher offers positive on-the-spot protection! Its easy-to-read dial tells its status at a glance . . . eliminates the danger of an empty extinguisher when fire strikes! Available in 2½ and 4 lb. models, Safe-T-Meter weighs so little and is so easy to operate that even a child can use it. Economical, too, because Safe-T-Meter's sturdy, precision built construction lasts a lifetime . . . its highly effective Safety First dry chemical is inexpensive to replace. Write now for complete information!

SAFETY FIRST COMPANY

ELMSFORD • NEW YORK

Kindly mention FIRE ENGINEERING *when writing advertisers*

EXTRA POWER FOR TOP PERFORMANCE

MACK type 21 PUMPER

Capable of mastering the biggest pumping jobs with ease . . . of fast response over the hilliest roads . . . the powerful Mack Type 21 pumper is widely regarded as the "heavy artillery" of land fire-fighting forces.

Like all other Mack apparatus, the Type 21 is a perfectly balanced and finely coordinated unit for easy handling and nimble performance. Its 275 hp engine guarantees fast runs as well as providing power-to-spare for its 1250 gpm pump. And these units are built into a rugged chassis designed throughout for long-lived, trouble-free Fire Department Service.

Mack can build your Type 21 to meet your individual fire-fighting requirements in cab style, number of discharge gates, deck nozzles, tanker or booster equipment, front or rear extra suction intakes, or other specialized designs. Remember, too, that Mack builds a complete line of apparatus in all sizes to meet your every fire-fighting need. Yours are the world's finest fire fighters when you *Modernize with Macks.*

"THE BIG SQUIRT"–Bakersfield, California, takes pride in its new Mack Type 21 triple combination pumper, shown delivering 2,250 gpm with a reach of 260 feet. Out of such performance has come its local nickname of "The Big Squirt".

Factory branches and distributors for service and parts in all principal cities. In Canada: Mack Trucks of Canada, Ltd.

Be Performance-Wise

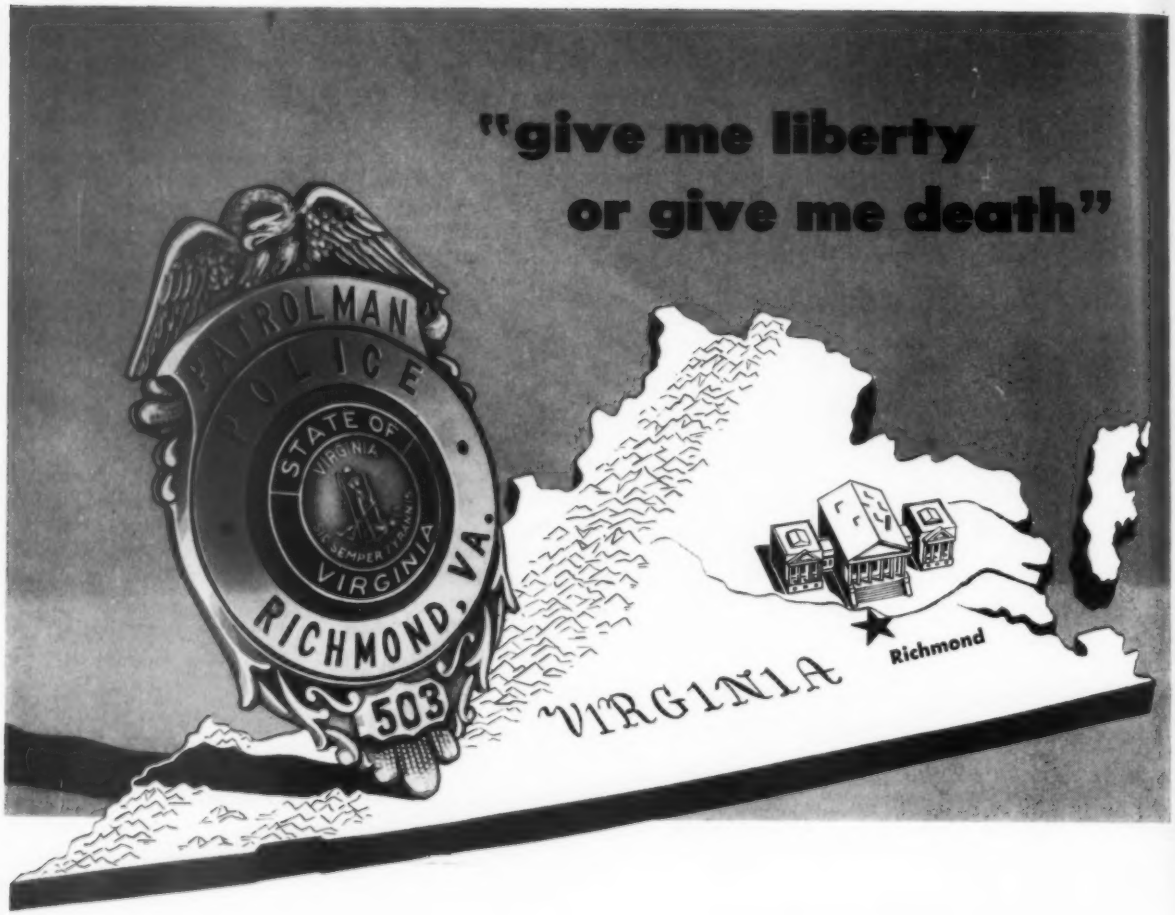
modernize with

MACK MANUFACTURING CORPORATION
Fire Apparatus Division
Long Island City 1, N. Y.

Mack ...outlasts them all!

8314

TRIPLE COMBINATION PUMPERS—500 TO 2000 GPM..SQUAD AND HOSE CARS..AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS



One of Virginia's native sons, Patrick Henry, brought fame to Richmond in 1775 when he made a speech designed to preserve freedom and democracy in Colonial Virginia. Speaking in St. John's Church he closed his speech with the words which are so familiar to all of us, "give me liberty or give me death."

Richmond has always been an important city in our country's growth — important, too, is the fact that the men in Richmond's police department wear BLACKINTON BADGES. For the plus value in badges see what BLACKINTON has to offer today.

BLACKINTON

V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

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See the Life-Saving Equipment Every Community Is Talking About . . . *and Operate It Yourself!*

WRITE OR WIRE FOR A COMPLETE DEMONSTRATION IN YOUR DEPARTMENT OF

E&J

the instrument that provides

MAXIMUM ASSURANCE OF SUCCESS IN TREATING ALL ASPHYXIATION CASES

RESUSCITATOR • ASPIRATOR • INHALATOR

ACCEPTED COUNCIL ON PHYSICAL MEDICINE and REHABILITATION AMERICAN MEDICAL ASSOCIATION

THE E&J IS AUTOMATIC *in every possible way*

AUTOMATICALLY *produces exact positive and negative pressures absolutely safe and correct for adult or tiny infant.*

AUTOMATICALLY *adjusts volume to any lung size.*

AUTOMATICALLY *signals if upper air passages are obstructed.*

AUTOMATICALLY *signals when natural breathing is resumed.*

THERE IS NO CHANCE FOR CONFUSION OR DOUBT

If your budget is s-t-r-e-t-c-h-e-d . . .

YOUR COMMUNITY WILL HELP YOU GET NEEDED E&J RESUSCITATORS *right now!*

By an outstanding feature article, a leading national magazine focused the attention of literally millions of responsible citizens on modern Resuscitators, many ways they save lives and the need for every community to be adequately equipped.

Make this interest work for your department! You can stimulate it and direct it...*convert it into needed equipment* ...through immediate use of the highly successful E&J Fund Raising Plan. Write or wire E&J at the address below RIGHT NOW. An E&J Representative, skilled in the fund-raising methods that have enabled Departments from coast to coast to get adequate equipment, will work with you to make your campaign successful. Get your request in NOW for quickest action. No obligation, of course.

Always glad to demonstrate!

E&J

E & J MANUFACTURING CO.
6117 San Fernando Road
Glendale 1, California

The NEW ALFCO DRY CHEMICAL FIRE EXTINGUISHER

Model No. 30

Fight class B and C fires with the new, effective Alfco Dry Chemical Extinguisher

It has many advantages which every fireman will appreciate. It is nontoxic and a nonconductor of electricity. It can be used on flammable liquid and live electrical fires simultaneously or separately.

It has a longer range at all climatic temperatures and a longer duration of discharge. A more complete discharge of its Dry Chemical contents assures maximum efficiency.

The Alfco No. 30 may be operated in any carrying position! . . . Scientifically designed nozzle provides for wider coverage of fire area! . . . Gas-tight, all-internal expelling gas connections! . . . Built-in safety disc! . . . Hose couplings neatly swaged to hose for greater strength, smarter appearance! . . . High hose-mounting position avoids compacting of Dry Chemical — affords neater appearance! . . . Easy to recharge without special devices or replacement parts!

Occupies only 7" x 9" floor space! . . . Lighter weight — only 42 lbs. when ready for use! . . . Alfco Dry Chemical is nontoxic, noncorrosive, nonconductor of electricity and will not freeze! Underwriters' ratings: B-1; C-1.

Shipping weight — 45 lbs.

Write us for literature and for demonstration.

Running Board Bracket holds unit securely. Note quick acting clamp for speedy removal, with ample room for hand grip.

Alfco is headquarters for complete Fire Department Supplies and Equipment.

AMERICAN-LAFRANCE-FOAMITE Corporation
ELMIRA · NEW YORK · U·S·A

Entire 3rd Floor cleared of smoke and hot gases immediately permitting firemen to advance into building with handlines in one minute-Fire under control within 5 minutes

A front page newspaper story of a recent fire told of a remarkable job of extinguishing a two alarm fire in a 3 story building by the New Haven Fire Department.

A huge 500 gpm Rockwood WaterFOG Nozzle, utilizing a new type of attack from an aerial ladder, played an important role in putting out this fire. Here, in his own words, are the facts which we were able to obtain directly from Chief Paul P. Heinz of the New Haven Fire Department.

"Attached is a photograph of a recent fire in our city. The Rockwood 500 gpm fog nozzle did an excellent job operating from our aerial ladder.

"The fire originated on the 2nd floor of a 3 story building and extended to the 3rd floor by means of an inside stairway and elevator shaft. The alarm was received at 6:25 P. M. on June 26, 1950 and when the first company arrived, heavy smoke and gases were being forced through the windows on the 3rd floor, front. Hand lines were ordered on the 2nd floor and in the rear but firemen were unable to advance due to extreme heat. A second alarm was transmitted at 6:30 P. M. At 6:35 P. M., the 500 gpm fog nozzle went into operation from our aerial ladder and in less than a minute the entire 3rd floor area was blackened out. The hand lines on the 2nd floor began to advance into the building and within 5 minutes the fire was under control.

"From my observations the big fog nozzle did accomplish two purposes. (1) it cleared the 3rd floor area of smoke and hot gases immediately and (2) the water particles were forced down the elevator shaft and inside stairway, cooling off the floor areas making it possible for the firemen to advance their lines. Our operating pressures at the nozzle was 150 lbs.

"This particular fire, like others we have had in the past, convinces us, more than ever before that broken water will do an excellent job on most any type of fire where the solid stream was considered effective."

Our bulletin B-500 describing the 500 gpm Rockwood WaterFOG Nozzle for use on ladder pipes or deluge guns will be sent to you upon request.

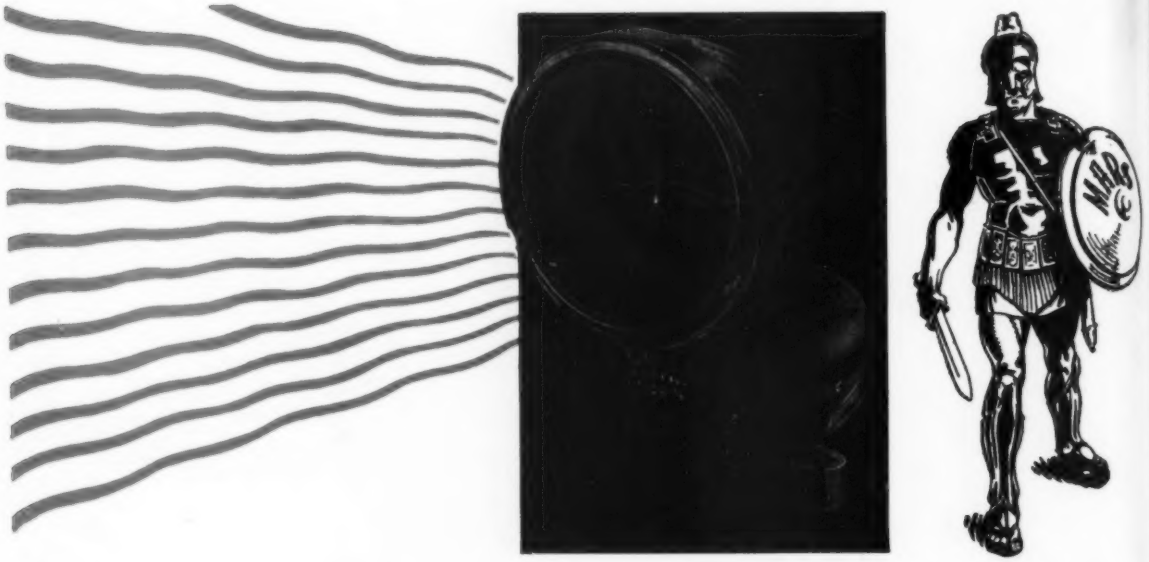
ROCKWOOD

Portable Fire Protection Division

ROCKWOOD SPRINKLER COMPANY

54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

HERE IS A WARNING SIGNAL LIGHT
THAT WILL LAST AS LONG AS YOUR APPARATUS



THE MARS SIGNAL LIGHT
AMERICA'S LARGEST SELLING WARNING SIGNAL LIGHT

IS FULLY GUARANTEED FOR FIVE YEARS!

Mars Has Never Failed to Back Up This Guarantee and Never Will

Motorists and pedestrians everywhere recognize THIS light.

Its powerful figure 8 beam of red light flashes a mile AHEAD of the apparatus from building line to building line — and hundreds of feet into the air.

It flashes through windows and reflects in rear vision mirrors of cars AHEAD, warning motorists that fire apparatus is BEHIND them.

It is never mistaken for a Neon Sign or a Christmas Tree ornament!

THERE ISN'T ANOTHER LIGHT LIKE IT

IN USE ON THOUSANDS OF FIRE APPARATUS AND OFFICERS' CARS FROM COAST TO COAST

IMMEDIATE DELIVERY

MARS SIGNAL LIGHT CO.

5737 W. DIVISION ST.
CHICAGO, ILL

Insist on MARS when you order New Equipment—Install it on Present Equipment

ALSO USED BY MANY OF AMERICA'S LEADING RAILROADS

Please mention FIRE ENGINEERING *when writing advertisers*

Sure-fire protection for San Antonio with 6

John BEAN HIGH-PRESSURE FOG FIRE FIGHTERS

THESE TWO new Bean Fire Fighters join four others now in service to make San Antonio, Texas, a real Bean town! 435-gal. tank—60 G.P.M. at 850-lb. pump pressure—2 hose lines, each 250 ft.

LOOKING for proof that Bean leads the way with maximum protection and minimum fire loss? Take a look at San Antonio:

The San Antonio Fire Department started with two John Bean High-pressure Fire Fighters . . . was so well pleased that it ordered two more. Recently, still another pair of these sensational fire fighters was put into service!

Yes, San Antonio's sold on Bean High-pressure Fire Fighters and you will be, too. They carry their own water supply, go into action fast, smother fires quickly and practically eliminate water damage.

There's only one high-pressure fog fire fighter and that's John Bean. Write today for full details on this modern line of fire fighting equipment.

BEAN *original* **HIGH-PRESSURE FOG FIRE FIGHTER**

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

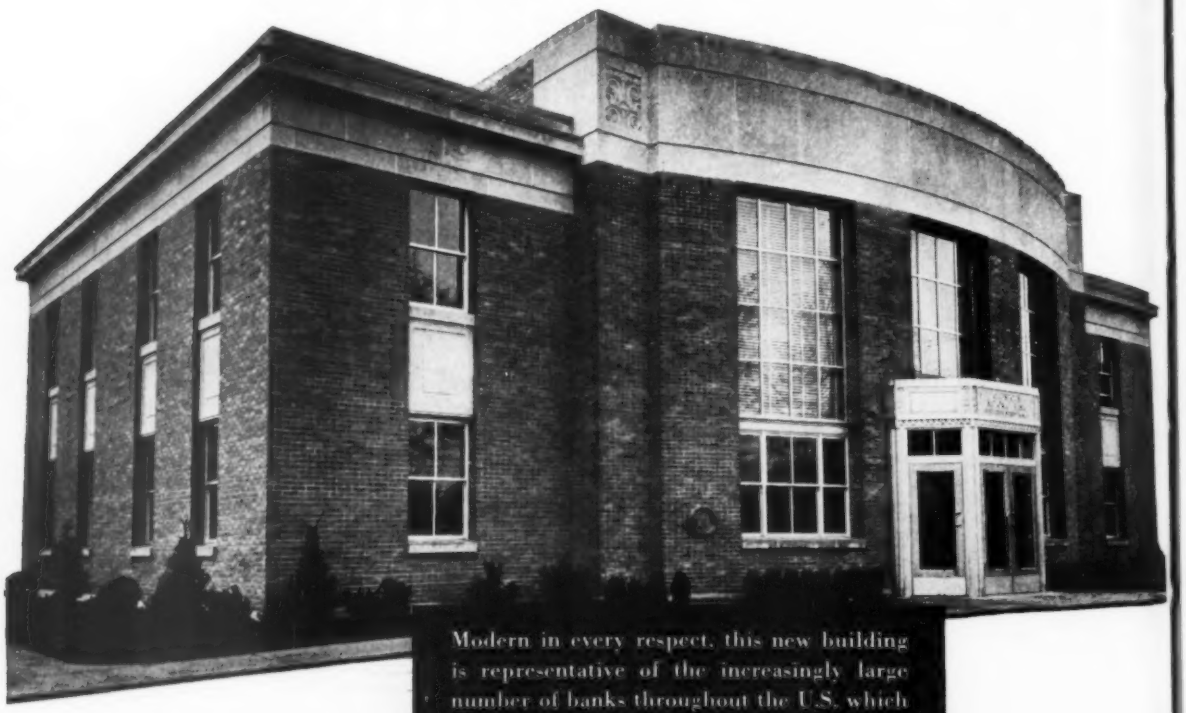
FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 126, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 409 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

THE ALLENTOWN NATIONAL BANK, NINETEENTH STREET BRANCH

PROTECTED *Automatically* AGAINST FIRE, BURGLARY AND HOLDUP



Modern in every respect, this new building is representative of the increasingly large number of banks throughout the U.S. which depend upon ADT AUTOMATIC PROTECTION to safeguard against fire, as well as burglary, holdup and other hazards.

ADT supplies all forms of Central Station Protection Services to enable banks and other institutions to obtain maximum protection at minimum cost.

AERO AUTOMATIC FIRE DETECTION AND ALARM SERVICE

SPRINKLER SUPERVISORY AND WATERFLOW ALARM SERVICE

PREMISES BURGLAR ALARM SERVICE
(for doors, windows and vulnerable areas)

PHONETALARM SERVICE
(sound detection for vaults)

HOLDUP ALARM SERVICE

AUTOMATIC HEATING SUPERVISORY SERVICE

Available in principal cities and surrounding areas. Write for complete information.

ADT

Controlled Companies of
AMERICAN DISTRICT TELEGRAPH COMPANY
155 Sixth Avenue · · New York 13, N.Y.

Friend of the Firefighter!

MIDWESTERN
PROTECTIVE CLOTHING

THE Original

Mackinaw Striped Safety Coat

Reduces Accidents — Saves Lives

Several years ago, Midwestern developed the *original* striped safety coat. The highly visible stripes are moulded to and vulcanized as part of the material. Thousands of Midwestern Safety Coats are serving fire departments throughout the world. Service records prove that these garments not only offer high safety visibility, but have the qualities required to withstand the rough usage required in your hazardous work of protecting life and property against fire.

All Midwestern Safety Coats have the moulded-in yellow stripes which are a part of the garment and not painted and sewed on. The *original* Midwestern Safety Coat will give you trouble-free protection and dependable service.

• PROTECTION
• COMFORT
• SERVICE

Largely through superior quality, design, fabric texture and advanced features, Midwestern is a leader in the field of firemen's clothing. All Midwestern specialized protective clothing have been developed from long years of experience . . . and each detail of design adds to the service, comfort, convenience and long wear of the garment.

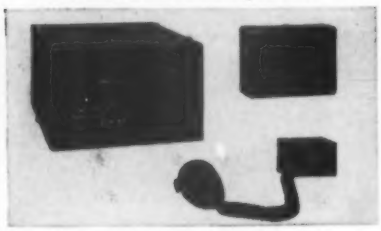
Regardless of climate and performance demanded, you will find a fabric to exactly suit your needs in our vast selection of crude rubber and fabric materials. The softness and flexibility of the high-grade materials used is your assurance of long service and real protection. For full information on our complete line, see your Midwestern dealer. A letter to the factory will also bring you material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

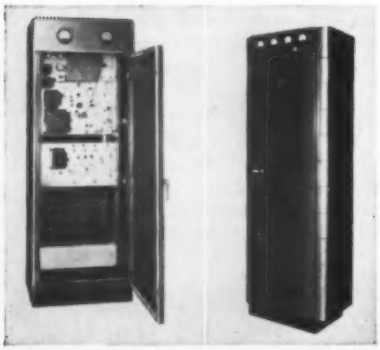
After unbiased comparative tests— the STATE of FLORIDA *goes RCA!*

Florida uses the complete RCA Fleetfone System



• Mobile Fleetfone 30 watts

• Station Control



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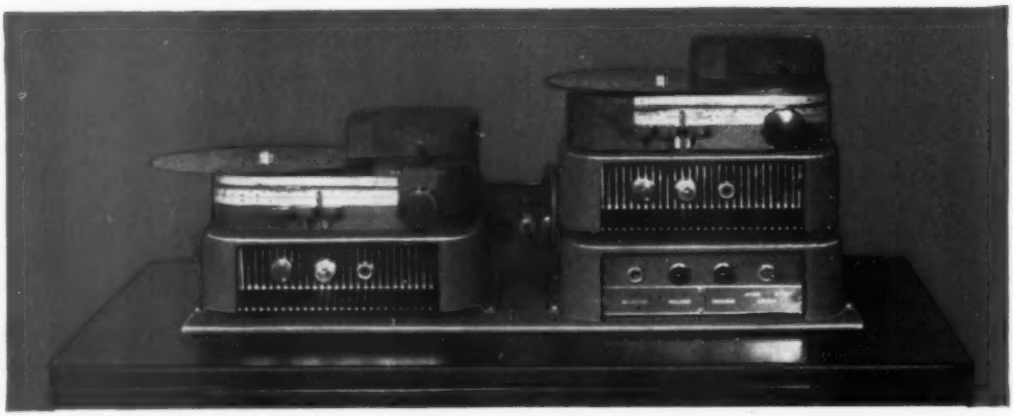

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SEPTEMBER, 1950

FIRE ENGINEERING

VOL. 103, NO. 9

With the Editor

Let's Have Action Despite the widespread wonderment, and even disbelief about it all, the plain truth is that this nation is at war. It is a war that at any minute may unleash upon this country destruction and slaughter on a scale that would stagger imagination.

It doesn't matter just what form the attack may take; high explosive bombs and incendiary, or guided missiles; atom bomb, or the super-ultimate of all weapons, the hydrogen bomb. The fact is that directly or indirectly fire will be the foe's greatest weapon.

There is no secret about this: military and civilian defense planners seeking to prepare U. S. cities against atomic attack (which is certain to come in any all-out war) admit their one great fear is fire. That point is made in the new guidebook for civilian defense called "The Effects of Atomic Weapons." And it makes it plain that protection —adequate protection—against A-bomb fire will be a gigantic and costly project.

What many of the experts do not talk too much about is the matter of other attacks, less deadly perhaps, but nonetheless potentially destructive, through bombs and guided missiles directed from submarines, ships and planes. Nor do they minimize the threat of sabotage by fire.

It may be true that relatively few cities and their neighboring areas need presently give serious concern to atomic defense, as prime enemy targets. But all-out war, with its increased strain on the nation's production, transportation and storage brings to every fire force, however insignificant, added responsibilities and duties. The destruction of grain fields, grain elevators, storage warehouses, as well as factories and manufacturing plants, can jeopardize the war effort. And that is where the fire service of the nation comes into the picture.

It has taken two years for the fire service to get any sort of comprehensive fire defense plan out of Washington. Readers of FIRE ENGINEERING know that until this year there has been little but lip service given civilian defense by the national government. Everyone knows what happened to the Hopley Report, and to the later sporadic attempts to formulate anything like a fire defense program, despite the willingness of the fire service to cooperate, a willingness that saw the presence of picked representatives such as Chief Frank C. McAuliffe, former President of the IAFC, and former New York Battalion Chief Carl Dreesen, sitting in on civil defense discussions at the Nation's capital.

Credit must be given those forethoughtful members of the fire service who have pleaded and planned for civilian protection, and to those few authorities in Washington who have accomplished, not without political and other hindrances, the first comprehensive civilian protection program to recognize the importance of the fire service in the scheme of national wartime civilian defense. To them and to the states and municipalities which are rapidly building civilian defense programs, go all credit. However, this is only a small beginning.

What is still lacking is action on two most vital factors of any civilian defense enterprise: one is *authority*, particularly over-all authority, and the other is *money!*

At present, power is vested in the States, the echelon being from governor to county executives, to municipality. But disaster transcends state and other geographical and political boundaries. There can be no political or any other interference when such a cataclysm as an atomic bomb raid occurs.

As to the other question—granted we have authority, and we have proper plans and programs, which by the way should include reinforcing the fire service with essential fire control apparatus and equipment and other defense facilities—*who is going to pay for all this?* It takes money to set up adequate defense and make it work! Yet at the present time, too many states, counties and municipalities are waiting on the Federal Government to learn how far it will finance defense. Too many are depending on voluntary, haphazard half-way effort to create and administer civilian defense.

It costs a quarter of a billion dollars to make a single atomic bomb. A small fraction of that amount might well be spent while this nation is thinking in terms of billions for defense, to finance adequate civilian defense.

Fred Shepperd

Fire Brigade Makes Good Stop At Locomotive Works Fire

Derby, England, Fire Department, with Assistance of Neighboring Firefighters, Checks Threatening Blaze

How a modern British fire brigade handles a threatening fire of large proportions is well illustrated by the following description of the fire which involved part of the huge locomotive works of the British Railways at Derby, England, on April 19th of this year.

This instructive article is reprinted from the July, 1950, issue of *Fire Protection and Accident Prevention Review* (published at Bouverie House, Fleet Street, London E. C. 4, England) through courtesy of the Editor of that leading fire journal, Mr. Geoffrey F. D. Pratt—The Editor.

DERBY Fire Brigade, under Chief Fire Officer H. A. C. Smith, on April 19 had an unusual and unenviable experience. On the afternoon that Home Office Inspector S. H. Charters was due to arrive for his annual inspection next day, the Brigade fought the biggest fire the town has had for many years. When he alighted at Derby station Mr. Charters was almost on the fireground, so was soon observing operations at the blazing locomotive works of British Railways, in Siddals Road.

Two features of this considerable fire are worthy of special mention. *First*, the efficient manner in which it was held in check; this, despite the premises being well alight, of old inflammable construction, several unprotected openings, no sprinkler installation, and part of a vast industrial area which easily might have been engulfed. There was the further handicap of a strong north-east wind. *Second*, the operation was a fine example of mobilizing and co-ordinated effort under Chief Fire Officer Smith, whose Brigade was reinforced by four pumps from the Derbyshire Fire Service; while the British Railways' works Brigade, whose appliances included a fixed steam pump as well as mobile ones and a fire-train, also gave very effective service. There was complete liaison throughout the operation.

By the courtesy of Chief Fire Officer Smith we are able to publish the following account of the fire-fighting operation which, undoubtedly, saved for British Railways their huge production shops at Derby, and gained from the Chief Mechanical Engineer of the London Midland Region a high tribute, which concluded: "I should be grateful if you would convey to your personnel of all ranks my admiration of their efficiency and thanks for their enthusiasm."

Derby Fire Brigade was called by telephone at 12:25 p.m., only one minute after the outbreak was discovered, and were on the scene by 12:29 p.m. The fire was first seen by workmen to be issuing through the timber casing of a hand-operated service lift between the ground and first floors of the locomotive stores ("A" service lift on plan). The men who discovered the fire reported having seen two distinct flashes at the south-east end of the building. In fact, these caused two small fires on work benches which were soon extinguished. As, however, that portion of the premises was completely destroyed, thus making any subsequent examination of electrical equipment impracticable, the supposed cause is returned as "unknown."

The fire spread with incredible fury and in two directions, north into the

Daily Mirror Photograph

This View of the Fire Gives a Good Impression of the Extent of the Derby Works, and Shows How the Fire Was Prevented from Spreading Beyond the Locomotive Stores (Building from Which Smoke Is Issuing)

office block and south towards the electrical stores. Before long, flames were shooting 30 ft. high, radiated heat was felt over 100 ft. away and three railway trucks were burning. Although most of the buildings involved were of one story, the locomotive stores, where the fire originated ("A"), comprised two stories and basement and were approximately 200 ft. x 70 ft. The general offices ("B") had three stories and basement, and measured about 200 ft. x 25 ft.

Many Unprotected Openings

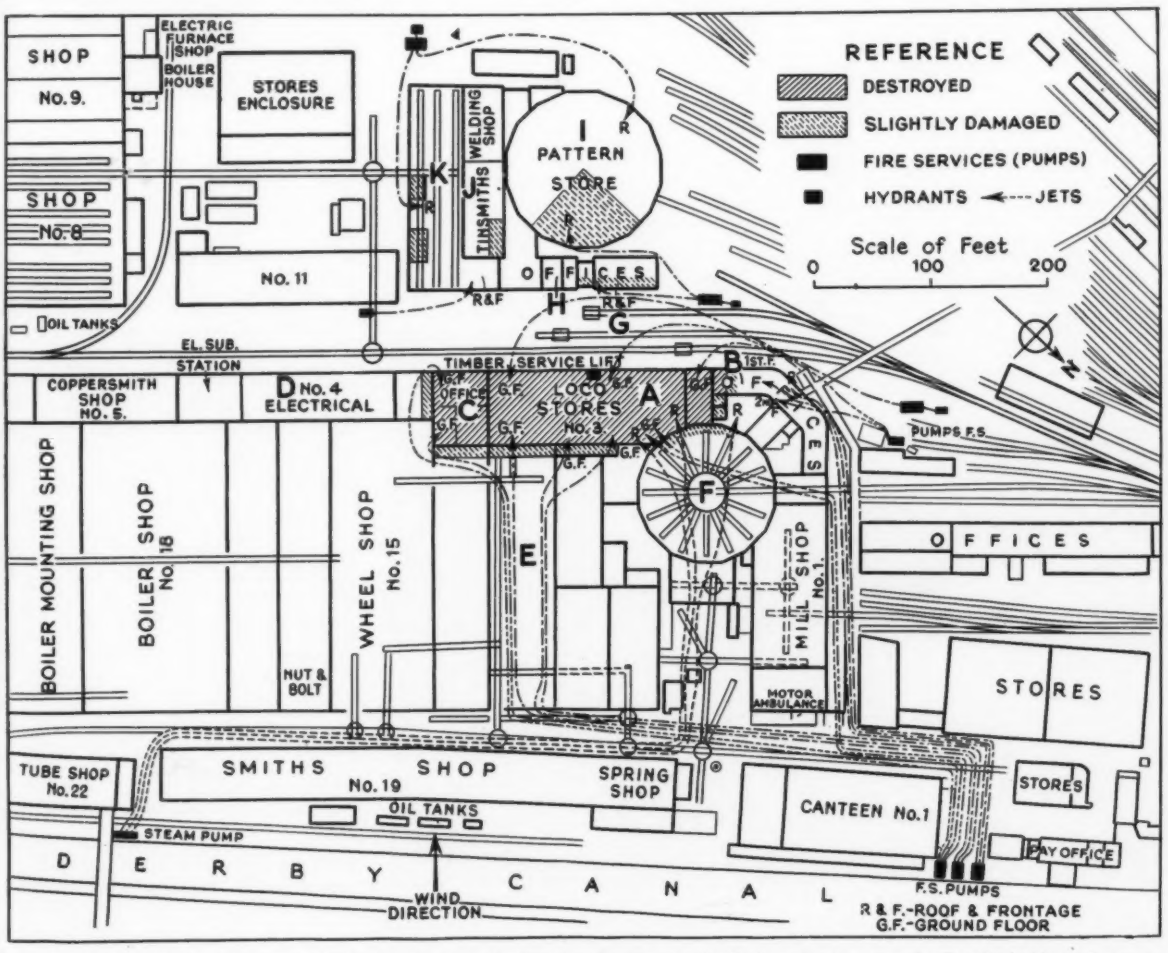
It will be of interest to note what were the other premises involved before the fire was under control after a gruelling fight for mastery which lasted from 12:29 p.m. until 4:37 p.m. The letters refer to their location on the plan reproduced with this article: ("C") stores office, including an e.ectrical substation containing an oil cooled transformer and associated electric equipment; ("D") electrical shop; ("E") wheel shops; ("F") round house containing general stores and rolling stock; ("G") rolling stock on railway sidings; ("H") general offices and electrical instrument stores; ("I") pattern store, containing wood patterns of locomotive parts; ("J") tinsmiths' shop; ("K") locomotive frame and welding shop. Whereas a few of the ground floors were of earth and concrete, most of the structures referred to above had timber floors. Roofs were close boarded and slated, the pattern shop even having timber trusses. Walls enclosing these considerable areas were brick and were load bearing. Other disadvantages confronting the fire-fighters were that these premises, over 100 years old, had one common roof to the main buildings and each floor was one large open area. The life shafts and stairway were also open and there were large unprotected openings to adjoining buildings. With these structural conditions, therefore, it is hardly surprising that the fire, fanned by a high wind, was sweeping through the establishment with great rapidity when the Brigade's first attendance arrived on the ground. Fortunately, there were two important advantages—water supplies were ample and in early afternoon there was plenty of help from the staff of British Railways for such salvage activity as was practicable.

It was obvious from the start of the operation that the locomotive stores ("A"), where the fire originated, were doomed and soon they were blazing from top to bottom. Moreover, the fate of general offices ("B") and that of the stores office and electrical sub-station ("C") was sealed. In fact, the grim situation facing Chief Fire Officer Smith was how to avert a conflagration which menaced the whole of the gigantic railway works extending to several acres. His Brigade, with the excellent co-operation of the works units and those from the Derbyshire stations at Long Eaton, Ilkeston and Duffield won their battle by the following tactics. (The letters are for guidance in studying the plan reproduced herewith.)

By works Brigade
2 jets from private hydrants on "A".
One "A" to "F"
10 jets from 3 pumps workings from open water (canal).
3 jets from steam power pump—fixed installation — working from open water (canal).
2 jets from pump working from static tank fed by private water main.
1 jet from one pump working from hydrant.
Railway trucks ("G")
1 jet from one pump working from private external hydrant.
On "H" to "K"
4 jets from two pumps working from private external hydrants.
1 jet from one external private hydrant.

With the exception of buildings "A," "B," and "C," together with their contents which inevitably suffered severely, also the three box-type railway trucks ("G"),

(*Continued on page* 780)



Plan of Part of the Derby Locomotive Works, Showing Area Involved in the Fire. Derby Railway Station Is at the Top Right-Hand Corner in the Position Occupied by the Key

Chicago's Ambulance Service Run by Fire Department

Fire Department Takes Over When Other Agencies Fail; Results Highly Satisfactory

By PAUL C. DITZEL

JOSEPH J. McCARTHY, former Marine Corps Captain, knows the value of prompt first aid treatment. McCarthy was leading an assault against a Japanese pillbox on Iwo Jima when he was critically wounded by mortar fire.

But fast and efficient first aid treatment saved Captain McCarthy's life. For his bravery in leading the attack he was awarded the Congressional Medal of Honor by President Truman.

Captain McCarthy returned to Chicago a hero and the city promptly took advantage of his leadership qualities by giving him the job of organizing a city-wide emergency ambulance system. The ambulance fleet, operated by the fire department, was to satisfy Chicago's acute need for fast and efficient service for accident cases.

Prior to entering the Marines, McCarthy was assigned to one of Chicago's busiest hook and ladder companies, Truck 11 at 36th and State Streets. So he had many years of fire experience which later proved helpful to him in organizing the ambulance division. As Supervisor of the ambulance service, McCarthy was given the rank of Captain.

Chicago's ambulance service—or lack of it—when Captain McCarthy took over in 1946 was a city disgrace. A nationally-circulated magazine described what it called "shocking" accident wards. The article told of an incident near Chicago's Loop in which a pedestrian, struck by a car, lay on the street for nearly an hour before a police patrol wagon arrived to take the injured person to a hospital.

The bleeding victim was placed upon a foul-smelling stretcher which seldom saw soap and brush. The police officers had not been taught common first aid principles. So they crudely lifted the injured person onto the stretcher. What the germs from the dirty stretcher didn't do, clumsy handling by conscientious though uninformed police officers was likely to do.

But Chicago didn't need a national magazine to acquaint it with the total lack of facilities for handling the city's daily average of 225 emergency cases. Newspapers constantly gave headlines to accident victims who writhed in gutters while they waited for as long as an hour or more for a police patrol wagon.

If the police district wagon was busy on another call, the desk sergeant would locate another one from another district—all of which took precious time when minutes count and a tourniquet might spell a saved life.

And chances of pneumonia increased while the victim laid on the street as snow or rain fell upon him.

New York City with its 8 million people jammed into 365.4 square miles found that 120 ambulances barely took care of its accident cases. Chicago, the nation's second largest city with 3,396,808 people and an area of 211.3 square miles, knew that something had to be done about its ambulance problem.

Captain Joseph J. McCarthy, Supervisor of Chicago's Fire Department Ambulance System. He Is Pictured Just After President Truman Awarded Him the Congressional Medal of Honor for Captain McCarthy's Bravery on Iwo Jima

Cleveland, with a population of 878,336 and an area of 73.1 square miles found that 21 ambulances was the minimum required to handle accidents among its citizens. And New Orleans, St. Louis, Washington, D. C., and nearby Milwaukee all put Chicago to shame with their emergency ambulance systems.

Captain McCarthy's job appeared proportionately greater as he visited each of these cities to learn how they set up and operated their systems.

A survey made in July, 1945, by the Chicago City Club, a civic organization which interested itself in the problem, discovered that there were 138 motor vehicles, public and private, which could be pressed into service in accident, emergency, or illness cases. Of this equipment, 94 vehicles were police patrol wagons and squad cars. The latter were equipped with stretchers which could be inserted by opening the trunk and elevating the rear seat of the sedans.

Only 44 of the vehicles actually could have been considered vehicles. Of these, 33 were privately owned. The others were operated by various government agencies, including the Chicago Health Department, the Contagious Disease Hospital, the Municipal Tuberculosis Sanitarium and Cook County agencies.

The Chicago Park District Police Department, which patrols the city's highway and park areas, including the ex-

Photo by Wayne Fickinger

Firemen George T. Nape (Left) and Ted J. Floodas Display Equipment Their Ambulance Carries. Note the Inhalator and Stretcher Equipment. This Ambulance, Quartered at Engine 50's House, Is One of 10 Mercuries Operated by the Chicago Fire Department. Chicago Also Owns Three Packards and One Cadillac Ambulance

tensive Outer Driver along Lake Michigan, had 15 sedan-type squad cars equipped with stretcher equipment. And the American Red Cross had a fleet of 20 ambulances in reserve for disasters or for use at large public gatherings.

The co-operation of various Chicago civic bodies and individuals was enlisted. Two of these groups, the City Club of Chicago, and the Chicago Hospital Council had in 1940 appointed subcommittees to study the problem in co-operation with special committees set up by the Chicago City Council and the Cook County Board of Commissioners.

The various surveys brought out some astonishing facts. One survey showed that only 18 per cent of Chicago's accident victims were being picked up by police squad cars, wagons, or the four fire ambulances then in service before Captain McCarthy took over.

Apparently the other 82 per cent of the accident victims were taken to hospitals in passing automobiles or taxicabs. The danger of removing persons with fractured bones by those ignorant of first aid principles can be imagined.

Another survey showed that not one of Chicago's 86 American Medical Association approved public and voluntary hospitals maintains an emergency ambulance service.

Fire Service in Field in 1928

The fire department had entered the ambulance field as far back as November, 1928, but these ambulances mainly answered fire alarms. A report cited figures showing that the four fire department ambulances in service in 1944 were not being used properly.

The report said the poor usage probably was due to the public's unawareness of the existence of such a service. For who would think to call the fire department when an accident occurred. This problem later proved to be a tough one calling for constant publicity to make Chicagoans conscious of the emergency ambulance service at their disposal if they needed it.

The Chicago Hospital Council report recommended that 20 ambulances was the minimum number required. But with the heavy influx of war workers into Chicago and the resulting construction of industrial plants in outlying districts, it soon became apparent that a minimum of 25 ambulances would be necessary.

So the city was prepared to proceed with the plan to bring Chicago's ambulance system up to 20th century needs. But there was one serious hitch. The war made it impossible for the city to obtain the ambulances. Moreover the manpower shortage in the fire department forced the pigeon-holeing of the plan until the war was over.

And that was then when Captain McCarthy entered the picture. Immediately he was confronted with the problem of obtaining ambulances. No manufacturer would guarantee a delivery date. Several automobile factories submitted bids, but none of the bids was satisfactory. All bids received by the city were on the basis of furnishing one ambulance. And none of the manufacturers could promise delivery before four or five months at the earliest.

The private ambulance operators' association suggested an alternative plan to fire department operation of emergency ambulances. The ambulance operators wanted an annual city appropriation of $50-70,000 for hiring privately owned ambulances.

They argued that many citizens would demand an ambulance when they really didn't require one. The operators claimed the city-operated service would be abused, and costs would skyrocket.

Photo by Wayne Fickinger

Rear View of One of Chicago's Fire Department Ambulances. Note the Door Which Opens Upward and the Compactness of the Equipment. The Inhalator Is Clamped to the Floor (Upper Left)

But San Francisco's experience helped explode the ambulance operator's argument. San Francisco pays $404,546 a year for its emergency hospital treatment service. The cost to the city per case averages $4. The cost to the individual taxpayer was shown to be less than 50 cents a year.

Proponents of a city-operated emergency ambulance service contended that a successful service could not be delegated to a private organization. Emergency ambulance service requires the closest co-operation between the ambulance service and the police or fire department. Such co-operation would be impossible if privately-owned equipment was used.

"The obligation to render this humanitarian service rests upon the city and county authorities, and the responsibility for developing it to the greatest possible degree of efficiency is a civic one which cannot be transferred to private ownership for profit," was the way the Chicago Hospital Council put it.

The fire department seemed to be the most logical place to put the ambulance service for several reasons. First, the public generally has confidence in its fire department. Moreover, the Chicago fire alarm system is regarded as one of the fastest and most efficient of its type in the world. This would insure prompt dispatching of ambulances.

Time, of course, is an important factor in picking up injured persons and removing them to a hospital. Fire stations were strategically located, which was another factor in deciding to place the ambulance service under fire department supervision.

Perhaps the police department could have taken over operation of the ambulances. But existing police equipment with its well-worn stretchers and the much-used blankets didn't seem adapted to the type of service for which the city was aiming. Moreover, the fire department already had a nucleus of four ambulances, around which Captain McCarthy could build his present fleet of 12 ambulances.

Through Captain McCarthy's persistance, the many problems both physical and political were ironed out and the new ambulance branch of the fire service began in January, 1946. A good part of the way "had to be felt" according to Captain McCarthy.

At the outset it was agreed that the ambulance system was to be used only for unexpected casualties such as street accidents, disasters, fires, and other incidents where the victim lay exposed and in need of emergency assistance.

12 Ambulances in Active Service

As of June 1, 1950, Chicago had 12 ambulances in service and two on reserve in case of equipment breakdown or accident. Captain McCarthy plans to have 25 ambulances in service.

Chicago's 14 fire ambulances now on hand consist of 10 Mercuries, three Packards, and one Cadillac.

The Mercuries, built by the Shop of Siebert, Inc., of Toledo, Ohio, have a 150-inch wheelbase and an overall length of 19½ feet. They have 34-inch side door openings to the carrying portion plus regular-sized doors to the compartment where the driver and his assistant ride. The rear door opens upward. This door is 39 inches wide. The Mercuries weigh 3,850 pounds and have a 100 horsepower V-8 motor. They cost between $7,500-8,000 equipped.

Warning signals consist of a Model 66 Federal siren, a spotlight on the attendant's side, plus red and green Mars lights mounted on the front fenders.

Equipment in the ambulances includes an E&J inhalator and resuscitator, one Baumgartner cot, one Rhodes stretcher, Corrigan arm and leg traction splints, metal arm and leg splints, wooden splints, two portable first aid kits, two rubber sheets, five blankets, rubber gloves, hot pads, a hot water bottle, ice packs, thermos bottle, an axe, crow-bar, and lantern. The ambulances are equipped with heaters and fans.

Two of the ambulances have two-way radios which operate through the Chicago police department radio. Three other ambulances are equipped with receivers only. Captain McCarthy eventually hopes to have all the ambulances equipped with two-way sets. A Chicago American Legion post donated one of the two-ways. Another veterans organization, the VFW, contributed four inhalators.

Five Men to Each Ambulance

There are five men assigned to each ambulance. Under Chicago fire department working hours, firemen work 24 hours and are off 24 hours. Every fourth working day they are granted three days off or "Kelly," as the firemen call it after former Chicago Mayor Edward J. Kelly during whose administration the plan was instituted.

Two firemen are assigned to each ambulance during each shift. The extra man fills in during days off and "Kellys."

Each ambulance man must have had at least 10 years experience in regular

(*Continued on page 777*)

Portland Firefighters Prepare For Radiological Hazards

By CAPT. JACK LOWE
Bureau of Fire, Portland, Ore.

ON the nineteenth of July, members of the Portland, Oregon, Fire Department fought fire under conditions that have never before existed in an American city. The fire occurred in an area contaminated by radioactive material—contaminated to the extent that firefighting operations without proper control might have been hazardous to the firefighters. No, an atomic incident had not occurred. The Portland fire department was merely participating in a field test which climaxed an intensive five weeks' radiological defense course designed to prepare ultimately all civilian defense agencies of the Pacific Northwest to function more efficiently during atomic incidents or in radiologically contaminated areas.

This course was sponsored by the National Security Resources Board in cooperation with the Atomic Energy Commission. It was held at Reed College and was coordinated by Dr. Arthur F. Scott, Reed College professor of chemistry. Instruction was by four members of the Reed Departments of Physics, Chemistry, and Biology, plus the director of the Applied Science Laboratory, University of Washington, the director of the Naval Radiological Defense Laboratory, San Francisco, and the deputy director for Medical Services of Oregon Civil Defense, who appeared as guest speakers.

Conference subjects included: Nuclear radiation, structure, and reactions; Geiger-Mueller counters and ionization chambers; Reactions of radiation with matter; Types of radioactive decay; Nuclear fission and radioactivity of fission products; Atomic bomb phenomena; Fall out; Atomic power; Principles of monitoring; Personnel monitoring; Effects of radiation on cells and tissues, blood, and enzyme systems; Immediate and delayed biological effects of radiation; Genetic effects of radiation; Radiation sickness; Chemistry of fission products; Psychology of disaster; Radioactive contamination and decontamination; Training for radiological monitoring; and Problems of radiological defense organization.

Fig. 2. This Shows the Dummy Female Casualty Being Removed from the Contaminated Area Along the Path of Minimum Radiation. Note the Approved Clothing for Monitors: Gloves, Coveralls, Cap or Hood Completely Covering the Head, Especially the Hair, and Filter Type Mask. The Monitoring Instrument Shown Is a "Juno" Ionization Chamber

Fig. 1. In the Foreground Firefighters Are Shown as They Go Into Action After Having Been Led Up to the Fire by Their Monitors. In the Background May Be Seen Other Firefighters Blocked from the Fire Because Their Monitors Are Unable to Find a Path Through the Invisible Wall of Gamma Rays

Laboratory work consisted of such problems as: Determination of the characteristics of Geiger-Mueller counters and ionization chambers; Preparation of radioactive samples for counting; Experiments in absorption; Production of radioactive isotopes and measurement of decay; Calibration of monitoring instruments; Experiments in shielding and the inverse square law; Use of pocket dosimeters and film badges; Preparation of radioautographs by isotopes taken up by animal tissues; Monitoring air and water; a field test; and Decontamination of objects found in the field test.

In addition, several moving pictures dealing with atomic bomb explosions and related phenomena were shown and a number of informal discussions were held at luncheon meetings attended by both students and the instructing staff.

The seventeen students included a professor of physics from Montana State College, a professor of chemical engineering from the University of Idaho, and assistant professors of physics from Washington State College and the University of Washington. These men are expected to return to their home states and establish schools for training civilian defense radiological monitoring instructors. Also among

the students were eight Oregon high school teachers who will return to their home towns to train monitoring teams. In addition, the students included two members of the Oregon State Board of Health and three Portland firefighters, Arthur M. Pederson, Wilbur C. Patheal, and Tom C. Turlay. The Portland firefighters will be used to train all members of their department in the general aspects of radiation and atomic bomb phenomena, as well as the particular tasks of radiological defense and radiological monitoring, so that the Portland department will be able to operate at maximum efficiency with minimum casualties under radioactive conditions.

The field test which climaxed the course was extremely interesting for several reasons. Among other things, it was the first public demonstration in the Pacific Northwest of the technique of radiological monitoring using Atomic Energy Commission approved equipment and clothing, and it was the first time regular municipal fire companies have had the opportunity to fight fire under radioactive conditions. The area selected was a grassy slope near a corner of the campus. A small shack was built, some articles of food and utensils were placed in it, and additional articles and two dummies were placed nearby. The shack was wired to ignite by remote control.

Area Contaminated

The area around the shack was then contaminated by placing in the vicinity twenty-two large aluminum capsules containing small amounts of "Cobalt 60," a radioactive isotope of cobalt having intense gamma radiation. This radioactive material was so placed that a radiation barrier was established completely around the shack with the exception of one lane through which the shack could be reached without passing through radiation greater than the maximum intensity set for the exercise, forty milliroentgens per hour. The shack was then ignited and Engine 25 and Compressor 1, each with two class members as their monitor, endeavored to reach the fire from opposite sides and extinguish it. To the firefighters it appeared as an ordinary blaze since radioactive emanations are not perceptible by normal human senses. You cannot smell radiation, see it, hear it, taste it or feel it. It is true the firefighters could have approached directly to the fire and extinguished it, but not without exposing themselves to a dose of radiation that might have been hazardous. Therefore, they depended entirely upon the monitoring teams with their measuring equipment to lead them safely to the fire. Actually, in the test, because there was only one clear lane into the fire, one company was completely stopped and prevented from reaching the fire by the invisible wall of gamma rays, which are similar to X-rays. The other company reached the fire and extinguished it.

The monitors wore white cotton coveralls with hoods, rubber and canvas gloves, overshoes, and assault type military gas masks. They were equipped with Geiger-Mueller counters and "Juno" ionization chambers. The firefighters wore their regular clothing with turnout coats, helmets, and canister-type smoke masks. Masks are essential whether smoke is present or not, to filter out any radioactive particles or mist which may be in the air, and which, if breathed or swallowed, creates an extremely dangerous personal hazard. In addition to Engine 25 and Compressor 1, Squad 1 was also standing by for first-aid, but its services were not required. Incidentally, the maximum radiation dosage received by any of the firefighters during the exercise was less than fifty milliroentgens.

This exercise, witnessed by fire chiefs and civilian defense officials from several Oregon cities, demonstrated that radiological monitoring teams are a requisite for firefighting in radioactively

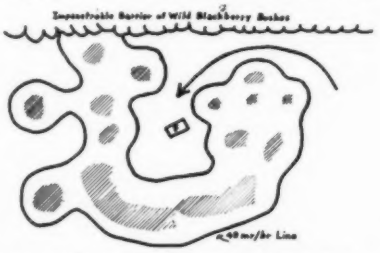


Fig. 3 Shows the Intensity of Radiation in Area of Field Test

In shaded areas radiation intensity was one hundred milliroentgens per hour (100 mr/hr) or greater. For purposes of the problem, fire fighters had to operate in areas with intensity less than 40 mr/hr. The heavy black line outlines the areas in which fire fighting activities were thus prohibited. The arrow indicates the path located by the monitors to reach the fire "F". This sketch was prepared from measurements taken after the field test.

contaminated areas, and that they must be provided in any civilian defense plan. While it is true that ground contamination at Hiroshima and Nagasaki was not dangerous, this was due to these bursts both being at about two thousand feet elevation. However, an atomic burst at ground level, or underground or under water, particularly salt water, would result in extensive ground contamination.

Duties of Monitors

The job of monitoring teams, insofar as the fire service is concerned, will be two-fold: first, to establish lanes into, or areas around, fires, where radiation is at a minimum; and second, to maintain a constant check on individual radiation dosages of all firefighting personnel so that no firefighters become radiation casualties unnecessarily. This check can be made by a group monitor who will keep a record of the average exposure for a group, or who will check at periodic intervals pocket dosimeters carried by each individual. Pocket dosimeters are little gadgets which look similar to fountain pens and measure total radiation dosage.

Whether personnel trained to serve as monitors will be provided for all civilian defense workers by a separate monitoring service, or whether such vital services as firefighting will have its own personnel trained and equipped to act as monitors, is a question which has not been satisfactorily answered. Nor have the relative advantages and disadvantages been thoroughly investigated in reference to the use of pocket dosimeters under such conditions as would exist in firefighting. Also, it is not known whether film plate badges will be suitable for firefighters, as dosages recorded by this means are not known until the film is developed and read.

Chief Edward Grenfell of the Portland department feels that a separate monitoring service may not be able to meet the monitoring requirements of the fire service which will be on the job within minutes after an atomic incident occurs, day or night, and which should have monitors with it when it goes into action. He points out that firefighters are skilled technicians who cannot be readily replaced, and that therefore they should be given the maximum protection possible. The officers in charge of a fire should know the total radiation his men are receiving so he can effect reliefs or shift them about and keep any one group from receiving excessive dosages.

Chief Grenfell also is of the opinion it might be best for the fire services to train their own personnel so there will be sufficient monitors with the firefighters at all times to properly advise the chief officers in replacing or relaying men fighting fire in radioactively "hot" areas. This will reduce the maximum exposure and prevent a few men receiving high dosages and becoming casualties.

We do know that a great deal can be done to minimize the effect of an atomic bomb and that casualties from radiation subsequent to the blast can be held relatively low if proper monitoring is available. The problem now is for civilian defense officials on a national level in cooperation with senior fire officers throughout the country to devise a plan which will insure that firefighters, as well as other skilled emergency services, have available a monitoring service that will insure minimum casualties from radiation.

Quincy Firemen Save Historic House

Fire fighters of Quincy and Wollaston, Mass, had a fire hydrant break at the critical period of their attempts to confine and extinguish a fire in the attic section of historic Captain Beale House, in Quincy Center.

Starting from a cause as yet undetermined, but under investigation by the state fire marshal's office, the fire had good headway when firemen under Chief Thomas F. Gorman reached the scene. Notwithstanding the difficulty in getting at the seat of the fire through the smoke in the attic, men were making some headway, using two 2½-in. hose lines from the nearest fire hydrant, when the hydrant broke off, and its feeder main burst.

For a period estimated by Chief Gorman at five minutes, firemen were forced to rely entirely upon two small booster lines as fellow fire fighters hustled to lay three more large lines from two other hydrants each approximately 500 feet away.

Forces responding on a second alarm, once water was available, managed to extinguish the fire, but not until damage estimated at $8,000 was done, most of it to the top floor and attic of the 11-room, 2½-story structure, built in 1792.

It was disclosed that the sudden water hammer, created when the broken hydrant automatically shut off following the break, apparently was too much for the 12-inch water main located about 500 feet distance from the hydrant. The main, installed in 1907 was split open by the sudden surge of pressure.

Fire Service Ladders and Their Use—Part V

Ladder Reach and Capacities—The Problem of Overloading—Marking Ladders.

By ROI B. WOOLLEY

Editor's Note: This is the fifth in the series of articles dealing with fire department ladders, ladder operations and evolutions. This chapter discusses the factors of ladder reach and load-carrying capacities, and the marking of fire service ladders.

Previous chapters in this series covered: "A Glossary of Ladder Terms" (May FIRE ENGINEERING); "A History of Fire Service Ladders" (June issue); "Ladder Standards: Types of Ladders and Their Construction" (July number) and "Uses and Limitations of Fire Service Ladders" (August issue).

As previously mentioned, contributors to this series of installments will not receive credit for their cooperation until the concluding installment. Certain photographs, and other pictures and diagrams used in this and later chapters, however, are acknowledged as used.

Since the publication of the first installment, numerous comments, criticisms and suggestions have been received from readers. These are most welcome and where possible will eventually be published.

SOMEBODY once asked Abraham Lincoln the question "How long should a soldier's legs be?" And the former president is reported to have answered "Long enough to reach from his hips to the ground."

How long should a fire department ladder be? The answer is—long enough and strong enough) to serve its purpose.

As has previously been pointed out, fire ladders serve many purposes and are called upon to perform these multitudinous uses under exacting conditions. For this reason they are specially designed and constructed to give the sort of performances requisite in the fire service.

Because of the diversities of use and application, no single fire ladder can hope to meet all requirements in length, weight and other details. Therefore, as previously noted, many different types and kinds and lengths of ladders are manufactured for, and used by, the service. It is incumbent upon the modern fire fighter that he should know these ladders and their applications and limitations. His department may not possess an aerial ladder, for example, but good firemanship suggests that he have better than a nodding acquaintance with aerial ladders; there is no telling when he may be forced to at least climb one—if not operate it.

Reach of Ladders

Any study of the types and kinds of fire ladders, and their uses and limitations, must naturally include a knowledge and understanding of ladder reach, or height to which it can be used most effectively. Reach is related to placement, a subject of a later installment of this treatise. It is related, also, to capacities, i.e.: ability to safely carry loads.

It is the purpose of this chapter to review this factor of reach and "loadability."

The actual height on a building to which a certain size ladder will reach is found by the use of the triangle rule that the length of either of the shorter sides of a right angle triangle is found by taking the square root of the difference of the squares of the other short side and the hypothenuse. The hypothenuse in every case is the length of the ladder in feet, while the base of the triangle is the distance the base of the ladder will be placed from the building.

To find the actual height to which a 35-foot ladder, for example, would reach up a building, proceed as follows:

Distance the base will be placed away from the building equals one-fifth of 35 (or 7) plus 2, or 9 ft. This is the base of the triangle. The hypothenue is 35 ft. (length of the ladder). Then the vertical side will be found by squaring 35, subtracting from this figure the square of 9, and then abstracting the square root of the remainder. Or, in figures: 1,225 — 81 equals 1,144. The square root is 33.8 ft., or the height the ladder will reach *when properly placed*. This is for a 35 ft. ladder.

The following table of figures, showing the distance the base of various size *trussed* ladders should be placed from the building, as well as the height

Scaling Ladder Serves to Extend the Reach of Aerial and Other Ladders. Shown Here Are Firemen Employing Scaling Ladder to Reach Fire on Eleventh Floor of Philadelphia Hotel

Rescue Operations Frequently Impose Excessive Loads on Ladders. For That Reason Fire Department Ladders Must Have a Liberal Margin of Safety

Photo by Joint Committee on Evolutions, F.D.I.C.

Emergency Hotel Escape: Ladder Is Raised by Any Standard Method. Heel Is Placed Out About 3-4 Feet from Building. Pole Men Hold Ladder Firmly to Wall, Escapees Using Both Sides of Ladder

at which ladders rest against the building, may serve as a reference:

Length of Ladder in Feet (Trussed)	Distance of Base from Building (Feet)	Height Above Ground at Which Ladder Rests Against Building (Feet)
10	4	9
12	4½	11
16	5	15
20	6	19
25	7	24
30	8	29
35	9	33.8
40	10	38
45	11	43
50	12	48
55	13	53
60	14	58
65	15	63

Note: The above distances at which ladders rest against a building are approximate, decimals being omitted.

Figuring the height of a floor, at 12 ft. and 4 ft. for height of sill (maximum) the reach of the various size straight, ground ladders would be as follows.

12, 16 and 20 foot ladders	2nd Floor
30 ft. ladder	3rd Floor
35 ft. ladder	3rd Floor*

The floors (windows) to which the various sizes of extension ladders would be placed, would be as follows:

40 ft. Extension Ladder, 3rd and 4th Floors.

45 ft. Ext. Ladder, 3rd and 4th Floors.

50 ft. Ext. Ladder, 3rd and 4th Floors.**

55 ft. Ext. Ladder, 4th and 5th Floors.***

60 ft. Ext. Ladder, 4th and 5th Floors.

65 ft. Ext. Ladder, 4th, 5th and 6th Floors.

Number of Men Permitted on Ladders

The number of men that can safely be permitted on a ladder depend upon its type, size and construction, its placement—and weight of the men. The truss type is stronger than the beam or rail ladder; the metal ladder is stronger than the wood type.

The weight a ladder will safely bear depends greatly upon whether or not it is erected properly. The following figures are based upon correct placement, and are for the weight of average men only, exclusive of hose or other loads. Charged lines should of course be allowed for in estimating ladder loads.

BEAM LADDER		TRUSSED LADDER		METAL LADDER	
Length	No. of Men	Length	No. of Men	Length	No. of Men
10	1	10	1	10	1
12	1	12	1	12	1
16	1	16	1	16	1
20	2	20	2	20	2
25	2	25	2	25	2
30	2	30	2	30	2
35	3	35	3	35	3
40	3	40	3	40	3
45	3	45	3	45	3
50	3	50	3	50	3
55	3	55	3	55	3
60	3	60	3	60	3
65	3	65	3	65	3

A safe overall rule for ladder loading is one (1) man for each 10 ft. of ladder length up to 30 feet. This rule applies for ladders built specifically for the fire service, and not to painters' or other commercial ladders that may be pressed into service as an emergency measure or due to cost considerations.[1] The above figures allow for added load such as when rescues are being made.

According to the statement of one apparatus manufacturer using metal ladders, the aluminum alloy ladders have been designed to carry the same load as wood ladders of corresponding length. The load-carrying capacity of the aluminum alloy aerial ladder permits one or two more men on the ladder than was permissible with the wood type ladder of the same length.

A number of authorities make no distinction between the wood and the metal ladders in estimating the number of men the ladders shall carry. The figures set for capacity of aerial ladders are as follows: 75 and 85 ft. five men; 100 ft. (metal type, of course) 8 men, properly spaced when the ladder is supported. Three men when the top of ladder is not supported. Two men is the limit on the fly.

Roof ladders, on pitched roofs, three men.

Pompier (scaling) ladders not more than two men.

All fire service ladders should be marked on the beam, preferably at both ends, to indicate their length.

*The 35-ft. ladder might serve to enter the 3rd floor, though it would be somewhat long and it might be necessary to bring the base out a little in order that the ladder would rest within the window.

**In an emergency, the 50-ft. ext. ladder might be used to reach the 5th floor, but in the latter case the ladder would not quite reach the 5th floor but would come within climbing range (2 ft. below the sill), depending upon the height of the sills in the structure.

***In an emergency the 55-ft. ext. ladder could be used to reach a 3rd floor window, but in this case it would somewhat over-reach this position. There are many occasions where it is necessary to employ a long extension ladder to reach short distances, in which case, of course, the fly is not extended. For obvious reasons, however, no extension ladder should be used where a straight ladder will safely provide the reach.

[1]This rule applies specifically to wood ladders. Obviously, fewer men should be permitted on wood beam ladders than wood trussed types—and more may be permitted on the metal types.

Scaling Ladder Being Used to Transfer Hotel Occupant from Fire Floor (12th) to Floor Below

It is customary to indicate the top, or tip of ground ladders with white paint, and the base, or butt, with black paint. The white tip facilitates placement and raising.

Some fire departments mark the top side of the beam of certain trussed type ladders at the ends of the ladder to indicate which side should be placed "up," or away from the building.

Another practice followed by some departments is to indicate by some distinctive marking or color, the rungs of the straight ladders to which rope should be tied in hoisting the respective ladders.

It is advantageous to so mark ladders that they may be easily identified by the company and/or department to which they belong. It is a general custom to either stencil or stamp the marking on the beams. Some departments punch a stencil numeral "key" in the metal shoe of portable ladders.

On all modern ladder trucks it is customary to indicate the locations and length of all portable ladders carried in the bed of the apparatus by numerals on the stanchion or braces,—or on the bodies, of the vehicle. Most modern ladder trucks have small electric lights controlled from the driver's seat to illuminate these numerals and the ladder bed to facilitate removal and storage of ladders and other equipment.

At least one volunteer department stencils, in white enamel, numerals on each ladder, indicating the distance the bottom of the ladder should normally be placed from the building or wall. The numeral is placed on the inside of the beam where it is not obtrusive but where any member of the company can easily note and check it. If the number is not visible, in handling the ladder, it can quickly be known that the ladder is upside down. Figures used are "5" for the 16 ft. ladder; "6" for 20 ft.; "7" for the 25 ft.; "8" for the 28 ft. and "8½" for the 30 footer.

Ladder Equipment for Apparatus

The specifications for ladder trucks, and for inclusion of ladders on pumpers, were drawn up by the International Association of Fire Chiefs, following a resolution adopted at the 1944 Convention in Grand Rapids. Early in 1945 a committee was appointed for this purpose, which included in addition to fire chiefs, engineers of the National Board of Fire Underwriters. The committee completed its work in 1946 and the Association jointly with the National Board published its findings under the title: "Suggested Specifications on Municipal Fire Apparatus."

The following specifications are taken from that authority:

City Service Ladder Truck[2]

Basic equipment shall include ladders totalling about 200 feet, to include the following (unless purchaser otherwise specifies):

1 50-ft. extension ladder
2 35-ft. extension (or 2 40-ft.) ladders
1 28-ft. wall ladder
1 25-ft. wall ladder
1 22-ft. wall ladder
1 16-ft. inside extension ladder
1 16-ft. roof ladder
1 12-ft. roof ladder

Quadruple Combination Truck ("Quad")

Ladders totalling 200-250-feet shall be furnished, as follows (unless purchaser otherwise specifies):

1 50-ft. extension ladder
1 35-ft. extension ladder
1 30-ft. extension ladder
1 28-ft. wall ladder
1 24-ft. wall ladder
1 20-ft. roof ladder with folding hooks
1 16-ft. roof ladder with folding hooks
1 16-ft. inside extension ladder
1 9-ft. folding or pole ladder.

Aerial Ladder Truck

Standard sizes of aerial ladders are 65 ft.; 75 ft.; 85 ft. and 100 ft.

Basic equipment, which includes ladders totalling about 200 feet, shall be furnished (unless purchaser otherwise specified):[3]

1 50-ft. extension ladder
2 35-ft. extension (or 2 40-ft.) ladders
1 28-ft. wall ladder
1 25-ft. wall ladder
1 22-ft. wall ladder
1 16-ft. inside extension ladder
1 16-ft. roof ladder
1 12-ft. roof ladder

Ladder Equipment for Pumpers

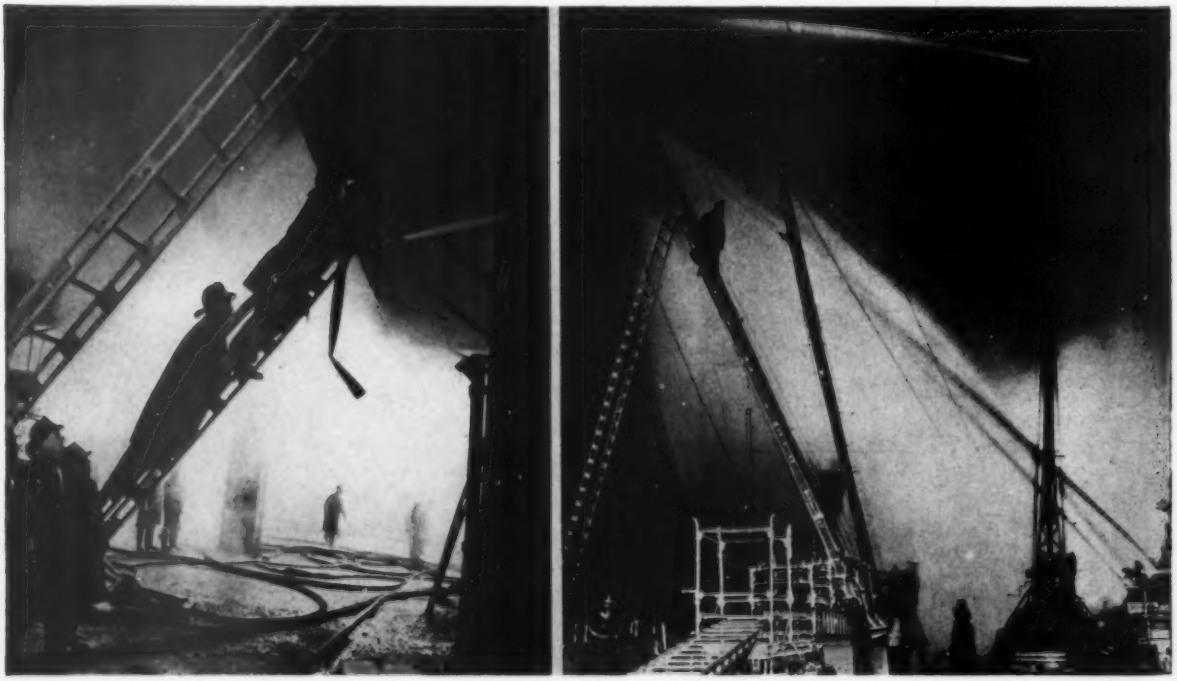
Basic equipment shall include:

1 Extension ladder (solid sides, if of wood) with folding hooks.
1 Extension ladder (sold sides, if of wood) to extend 24 ft. For rural service and communities without ladder truck service the extension ladder should be at least 30-ft.

(*Continued on page 773*)

[2]Recommendations of the Board of Fire Underwriters since these specifications went into effect include the mounting of an aerial ladder (minimum 65 ft.) on all service ladder trucks. It is reported that credit is no longer given by rating boards for service ladder trucks not mounting some form of mechanically operated aerial ladder.

[3]The apparatus may consist of a 4-wheel tractor, or ladder truck and motor on a common chassis, "with wheel base and turning radius which will permit ready operation in the streets and at a fire." (Known as a "one-man-operated" type.) The aerial ladder shall be in two or more sections . . . and so powered, that from a horizontal position it will lift a weight of 100 lbs. on the free end of the butt ladder, without lead hose or ladder pipe.



Left: Ladders Cannot Always Be Placed "According to Rule." Here, Overhead Structure Makes It Necessary to Place Base of Ladder Well Away from Building. Right: Bracing an Aerial Ladder by Use of Portable Ladder to Enable the Former to Carry a Greater Load with Safety

FIRE DEPARTMENT OF ROME, ITALY, A MODERN AND EFFICIENT UNIT

Fire College an Outstanding Educational Institution; Fire Losses Low; False Alarms Negligible

By Jerry Daly

THE Fire Brigade of Rome, Italy, is not one of the attractions for the tourist trade in Europe this summer. The reason for this is that there are so few fires in the Italian capital, the fire brigade seldom has to respond and, consequently, visiting pilgrims get no glimpse of Rome's otherwise efficient, well equipped, and scientifically trained fire department of 586 officers and men.

Osvaldo Piermarini, Chief, Rome Fire Department

Comandante Fortunato Cini, Chief Instructor-in-Charge Fire School of Italy

This pilgrim took a scrutinizing look behind the scenes and found that Romans are a careful, cautious and circumspect population of 2,000,000 Italians residing within 38 square miles. They are protected from fire first by the type of building construction; second, by their personal adherence to a clean and careful and sanitary city, and finally by a vigilant fire corps that has so little extinguishment to do (as compared with the average American city) that scientific prevention of fire in the first place is the reason that Rome no longer burns in the second place.

Rome fire losses for the first half of this year were 97,355,500 lire, or about $156,000. Buildings are made of stone, concrete, marble, brick, or stucco and are built to withstand centuries instead of generations.

Fires that are caused by negligence are apt to cost the careless occupant a heavy penalty if it can be established that the fire could have been prevented. Matches, like soap, are very scarce and lighter fluid is "artifizio."

Stairways and hallways are generally of marble. There are no fire escapes but there are many balconies. Inspection of garages, shops, service stations, and industrial hazards is made once a month and is punctiliously done. Benzina (gasoline) pumps are located in profusion along the open curbing of the streets where you fill up, at 80 lire (12 cents) a litre. Every store is inspected. Inspection fees range from 300 to 10,000 lire (50 cents to $15) a year, depending on the type of building and the potential hazard of occupancy.

Fire apparatus in Rome is strictly native. Repairs are made by the brigades own mechanics. There are 140 pieces, ranging from Magirus ladders of 147 feet and less down to motor pumps of the topolino (little mouse) size. Some pumpers carry individual water tanks. Others are tank trucks without pumps. A small portable boat in the central fire station can be carried on a trailer to the Tiber River, which looks more like a canal. Among the miscellaneous fire engines are such specialties as foam trucks, a crane (55 tons), two ambulances, a floodlight and ventilation truck, a wrecker, rescue wagon with inhalation equipment, 11 transport carriers, one bus, 7 motorcycles, 9 officers cars, air compressor truck, acetylene torch truck, 7 vehicles with 15 KW generators, 2 radio service cars and a radio station.

Fire engines in Rome have no bells—sirens only—and a flashing red light which helps clear the way in cooperation with a very efficient traffic police.

Rome has no telegraph system. Alarms of fire—1,099 last year—reached the brigade via telephone by calling Rome 44-444 or 55-555. Telephones in Rome have no call letters. In addition to the 1,099 fires last year, the brigade rolled to 163 calls for collapsed buildings, 193 for flooded cellars, 202 for ambulance service, and 905 miscellaneous runs—a total of 2,562 calls, aggregating 28,801 hours of service and requiring 17,898 man power with the use of 4,229 pieces of equipment. False alarms in Rome are unheard of.

Rome has no post fire hydrants. Instead, there are sidewalk outlets flush hydrants hidden in traps covered with hinged plates. The average pressure is 60 pounds. The water comes from a reservoir in the mountains. These outlets are found by means of a symbol painted on the facade of the building abeam of the outlet. The symbol is the letter "I" in a white circular 20-inch disc with black border.

The (canvas) hose lengths are 60 feet. Suction hose is 4.72 inches and the pumpers discharge 750 GPM.

Quasi-Military Organization

The Fire Service throughout Italy is known as Corpo Nazionale Vigili del Fuoco (National Corps of Fire Watchers). It is organized on an efficient quasi-military basis. There are 92 separate corps (one for each Province) throughout the nation and all are under the General Director of the Ministry of the Interior, who is Prefect, Joseph Pieche. The Inspector General and Commanding Officer of the Central School of Instruction in Rome is Doctor-Engineer Fortunato Cini. The Chief of the Rome Fire Brigade is Osvaldo Piermarini, a veteran of World War I, who was later an officer in the Venice Fire Department and was transferred 16 years ago to Rome where he served as First Officer for 14 years prior to appointment as Chief of Brigade two years ago.

The National Fire College is located at the Capannella outside the walls of Rome and is near the Ciampino Airport. The airport has its own fire brigade. The training school covers an area of about 20,000 square yards. It contains several expansive new buildings of three and four stories. The drill tower is 84 feet. The predecessor fire school was destroyed in 1943 by the Luftwaffe. The new school has the touch of the proverbial "fine Italian hand" and when completed (now 95 percent finished) it will be the pride of the scientific fire fighting profession of the world.

Dr. Cini and Commandante Piermarini just beamed with pride as they piloted this reporter about the grounds and

All Fire Fighters in Rome Carry Breathing Masks

Self-Contained Oxygen Masks Are Available on Each Unit

through the various buildings and explained* the numerous features of the course of studies and practical training.

The curriculum embraces, in addition to the ordinary "know-how" of the extinguishment, the technique of fire fighting with the use of breathing apparatus. There are no "smoke-eaters" in Rome. All firemen carry a breathing mask. They put them on when they feel the need, according to one's endurance.

Other subjects on the college agenda are building construction, hydraulics, electricity, chemistry, photography, air conditioning, etc. The school has a library filled with technical books; a room for conferences, calisthenics, officers club, writing room, music room, billiard room, dining room, and a bar. The dormitories are "palatial." There is also an infirmary and a chapel. Saint Barbara, the Patron Saint of Fire Fighters, is the subject of one of four large mosaics on the facade of the new Fire College. The others depict fires, wrecks, floods, and salvage —all jobs done by the fire brigade. The Rome Fire Department holds an annual memorial service with a parade. Names of all fire fighters who fell in action are on a memorial plaque.

The school is divided into three groups: officers; non-commissioned officers; and the men. All officers must be engineers and attend the school for six months. They have a thorough knowledge of the main industries in all parts of the country.

Firemen are not promoted to officer status. Italian Army vets are preferred if they have five years of elementary schooling. They must be skilled in some trade or craft that is connected with building construction. They are appointed at the age of 20 and can retire on pension at 52 or earlier for disability or for what is called "privileged pension." Height requirement is 5½ feet with weight in proportion. Recruits who pass successfully through four months in the school are assigned to locations of their choice in the order of rating in the final examinations in written and practical subjects.

*Thanks to an efficient and personable interpreter, Miss Vera Franceschi, San Francisco, born concert pianist.

Average pay for firemen is 33,000 lire ($53) a month and more for each child in the family. They work 24 hours and are off 24 hours.

Prefect Joseph Pieche, General Director of the Ministry of Interior, said that since the size of the Italian Army is on a reduced basis under the terms of the treaty of Peace, the fire fighting reserves have been increased considerably so as to provide the nucleus for trained technicians.

The Rome Fire Department is not spectacular. It has science instead of showmanship. Rome newspapers seldom emblazon fire headlines—they have no spectacular fires. They prevent them instead!

AMERICAN MILITARY FIRE FORCE AIDS GERMAN CIVILIAN UNITS

Cooperation Proves Effective In Controlling Numerous Fires of All Sizes

By Bernhard Peill

THE Fire Department of the Augsburg, Germany, Military Post, U. S. Army, is under the direction of Mr. Forrest, Fire Marshal, and M. F. Bund, Fire Chief (German civilian).

The department, which is also responsible for the fire protection of the Füssen and Sonthofen Sub Posts, U. S. Army, now consists of 112 full-paid firemen, all German civilians.

The headquarters of the Fire Marshal, and the main Fire Station, are situated in the Augsburg Reese Barracks where are located the chief's car, a utility truck and four pieces of motorized equipment. The second fire station in Augsburg houses a single unit of apparatus. There is also a jeep with a 40-gallon foam extinguisher stationed at the air field.

Fire stations in Füssen and Sonthofen (Ordensburg) presently houses two pieces of apparatus each, while the Oberstdorf Recreation Center is headquarters for an additional motorized fire company.

Most of the fire stations also house O.C.D. trailer pumping units. The balance of the motorized equipment includes both of the standard types of fire trucks maintained by the Army. It is interesting to note that two types of fire apparatus built by German factories and delivered last year to the American Fire Department in Munich—one 750 G.P.M pumper with large booster tank, and one Metz aerial ladder, have been duplicated in equipment for the Augsburg Main Fire Station.

Life Line, Ropes and Special Stretcher Used for Rescue of Injured Persons from Opera House Roof to Street Level Is Demonstrated by Military Government Fire Department

It is also of interest that although most of the large fire fighting equipment in

U. S. A. Military Fire Department, Augsburg, Germany, Demonstrate a 100-Year-Old German Hand Fire Engine During Fire Prevention Week Demonstration 1949

operation "descended" from the States, every fire truck carries at the same time some special equipment of German origin, such as oxygen breathing appliance and gas masks, life nets, air-foam guns and connections for local underground hydrants, etc.

Life Net Used for Demonstration by Firemen of the Military Government, Jumping Only from Second Floor

Although it is reported that German oxygen breathing appliances and gas masks appear to be of good quality, German life nets require almost 20 men for their operation and are said at the same time to be not sufficiently resistant to permit firemen to jump from upper floors of buildings during exercises. For this reason a dummy filled with sand must be thrown into the net from the upper floors of the drill tower.

It is likewise reported that although German air-foam guns and nozzles are highly appreciated by the American fire authorities in Europe, every fire truck is equipped with the low velocity water fog applicator and other American appliances.

Like most of the other Military fire departments throughout the U. S. A. Zone of Germany, the Augsburg Military Fire Department is using both American and German fire extinguishers for local protection of military installations and the department's dwellings in Augsburg, Füssen, Sonthofen and Oberstdorf. Notwithstanding the fact that CO_2, CTC, soda-acid and foam extinguishers are preferred for motor pools, air fields, gasoline depots, warehouses and other installations, the ordinary water tank extinguisher is giving an excellent account of itself.

The fire department of the Augsburg Military Post receives numerous calls not only from within the Military Community itself, but also from civilian establishments and inhabitants all over the city and the suburban districts. The civilian, full-paid fire department of Augsburg, having only two double companies on duty in the Central Fire Station, is greatly dependent upon the help not only of the numerous plant fire brigades in the city and volunteer fire companies in the neighboring rural districts, but also during, serious fires, upon the American fire forces.

Last winter a serious plant fire threatened the downtown area of the city while the civilian fire department was handicapped at the beginning of the blaze because one of its companies was out on a special call at the time. In the emergency, the Military Fire Department responded at once with a sufficient force and equipment. While the civilian fire fighters were busy in the effort to rescue inhabitants of adjacent tenement houses, the Military firemen succeeded in cutting off the fire by prompt application of wagon pipes and deluge sets. Extension of the fire to neighboring tenements and factories was prevented before the general alarm brought in sufficient additional manpower and apparatus, from the different German plant brigades, to complete extinguishment of the fire.

Military fire fighters staged another spectacular demonstration of its prowess for Augsburg's population when the Military Fire Department held a public exhibition at the City Opera House during Fire Prevention Week—yes, Fire Prevention Week held in the American sector of Germany, as well as in the United States. Although the interior of the theatre had not yet been rebuilt since the air raids had wrecked it five years before, the entire front of the building was standing and served sufficiently for dramatic demonstrations, the firemen using water and foam, hand lines and wagon pipes, fog applicators, life lines and life nets. Life lines and ropes also were used to carry stretchers supporting injured persons, from the theatre's roof to the street level and for several ladder evolutions.

Considerable interest was shown in the exhibitions of booster line and wagon pipe operations conducted with the apparatus, some of the latter being fitted with former O.C.D. pumps mounted behind the drivers' seats. Incidentally, when in motion, the drivers of these rigs are attached to the apparatus by means of a special life belt. Water supply for the nozzles is taken from the large booster tank and the stream of the wagon pipe serves to fight forest and ground fires or airplane crash fires. They can also be used against street demonstrators.

The good work of the department has been highly praised by Brig. Gen. C. A. Pierce and other military authorities.

It is disclosed that recently a large brick factory in the suburban districts of Munich partially burned with a loss of about $1½ million. At this fire the civilian fire department of the city was called upon to stretch and operate 39 lines of hose. In the ensuing emergeny, with almost the entire civilian fire force at work on this fire, the American Military Fire Department came in to help and covered the unprotected capital of Bavaria.

In Augsburg, however, the services of the Military firemen are required almost daily, and there is close collaboration between the civilian and the regular American personnel.

A factor in the fire protection forces of Augsburg is Fire Chief M. F. Bund, German civilian, whose father and grandfather previously served as chiefs of the former Augsburg volunteer fire department, the oldest organization of its kind in Bavaria, dating back to 1849.

Chief Bund also served in the Augsburg department as both volunteer and fireman prior to the World War II. During the air raid attacks on the city, he received considerable experience in large scale fire figthing operations. In 1945 he was appointed Chief of the newly organized Augsburg Military Fire Department. His ambition, which he hopes to have gratified shortly, is to pay a visit to the States with his fellow firemen, where they will have opportunity to study the latest developments in the field of fire control and prevention.

Children Cause of Fires

Arson committed by children has become the most serious cause of fire in Philadelphia, according to Public Safety Director Samuel H. Rosenberg. He said in a statement, an "appalling increase" in the number of fires started by children had been called to his attention by Fire Marshal George H. Kington.

The Director said there were 163 such fires in 1948, 355 in 1949 and 203 so far this year. The damage, in 1946, from fires in this category totaled about $250,000 and already has reached about $500,000 so far this year, he claimed.

Brig. General C. A. Pierce, Augsburg Military Post, U. S. Army, Congratulating Fire Chief M. F. Bund for Good Work at Fire Prevention Week Demonstration

Memphis Fireman Killed, Nine Hurt, by Roof Collapse

One fireman was killed and nine injured on Aug. 7, 1950, in the collapse of a roof while fighting a 3-alarm fire in the Cudahy Packing Co., at Memphis, Tenn. which is said to have gotten its start because of a delayed alarm.

The fire broke out shortly before noon in a building formerly used as a storeroom, but at the time of the fire containing only equipment. The company planned to move out of the 37-year old structure, which measured 200 ft. long by 50 ft. wide, and had a large overhanging roof over a loading platform. Fire walls separated offices on the north end of the building and the manufacturing section on the south, from the burned out section. These were both two-story structures; the old warehouse section was 1½-story.

Four negro workmen were cutting pipe with an acetylene torch at the time of the start of the fire, which apparently originated between cork-lined walls nearby. Using chemical extinguishers, they attempted to fight the fire, for a period of ten minutes, before calling the fire department, according to Fire Marshal Edgar Lovell.

Flames were leaping 15 feet high through three ventilators on the roof when Fire Chief John Klinck arrived. First-due companies reached the scene only a couple of minutes after receiving the initial alarm, at 11:21 A.M., and shot in a second alarm at 11:23, followed by a third alarm at 11:36 and special calls for additional help at 12:09 after the accident which caused the death of one fireman, R. W. Fortune, and injuries to nine others.

Firemen had already been fighting the fire nearly an hour when the roof on the west side of the structure collapsed without warning. Earlier, the roof over the building proper had crashed in. Some 12 to 15 firemen were on the loading platform pulling hose into the building when the 200-foot roof dropped, pinning most of them beneath it.

The instant the roof fell, hundreds of men watching the fire, together with Illinois Railroad workers, rushed forward in a vain effort to raise up the roof. Firemen and volunteers cut away at the roof with axes, and a negro train crew tore up planks to use as levers in the effort to raise the wreckage, while beneath the roof the trapped men fought to extricate themselves.

Some of the victims managed to escape unaided and uninjured; others had to be cut loose. Fireman Fortune was pinned under a 4x8 ft. wood beam and, although doctors worked over him for almost an hour at St. Joseph's Hospital, he succumbed to injuries.

The injured men who were hospitalized at St. Joseph's were: Firemen G. W. Russell, head injury and fractured shoulder; R. W. Hutcheson, fractured back, and T. S. Peckett, fractured ankle, ribs and hip. Treated and dismissed were: Lieut. S. E. Jones and Fireman R. K. Vogt. Admitted to John Gaston Hospital were: Driver Marion Sanders fractured back; Capt. Robert A. Kinnane, chest injuries and shock; and Fireman C. DeLashmit, fractured leg. Treated and dismissed were: Firemen F. E. Fulghum. Driver C. H. Stanley and Fireman A. J. White. When the roof collapsed, ambulances were summoned.

Fighting the stubborn blaze was complicated by the difficulty in reaching the fire in the long attic. Firemen had to hack their way through ceilings in intense heat to get water on the flames. In all, 14 ladder and pumper companies, using hand lines and high pressure deck pipes fought the blaze.

The towering pillar of smoke, rising from the fire attracted hundreds of spectators, many of whom rushed to help firemen extricate their brothers. Following the collapse Mayor Overton, City Commissioner Boyle and top police as well as ranking fire officials were at the scene. The fire, which caused an estimated $75,000 loss, was the first 3-alarm blaze Memphis firemen have had to fight since March 6, 1947. The death of Fireman Fortune marked the first fatality during fire fighting operations among Memphis Fire Department personnel since late in 1934.

Cudahy Packing Company Fire at Memphis, Tenn., Just Before Roof Collapsed

Volunteers Attempt to Lift Fallen Roof at Memphis Fire to Free Trapped Firemen

President Proclaims Fire Prevention Week

President Harry S. Truman on August 21 designated October 8-14 as "Fire Prevention Week" and called on all Americans "in this critical period" to help keep the nation strong through the prevention of fires which needlessly destroy life and property.

Following is the text of the President's Proclamation:

"WHEREAS, in this critical period, it is imperative that our country keep itself strong in manpower, productive facilities, and material resources; and

"WHEREAS, preventable fires took a frightful toll last year, resulting in loss of life for some 10,000 of our fellow Americans and permanent disability for countless others; and

"WHEREAS, the destruction of materials and facilities by fire impairs the production of supplies essential to the defense of our country and to the physical welfare of our people; and

"WHEREAS, needless fires also destroy each year an untold amount of irreplaceable natural resources and of private and public property including forests and farms, schools and churches, hospitals, homes, and factories:

NOW, THEREFORE, I, HARRY S. TRUMAN, President of the United States of America, do hereby designate the week beginning October 8, 1950, as Fire Prevention Week.

"I suggest that, bearing in mind the present emergency, all of us rededicate ourselves to a year-round campaign

against destructive fires in our homes, in our industrial plants, and in our communities generally. I request that State and local Governments, the American National Red Cross, the National Fire Waste Council, the Chamber of Commerce of the United States, business, labor, and farm organizations, churches, schools, civic groups, and the agencies of public information, including newspapers, magazines, and the radio, television, and motion-picture industries, cooperate fully in the observance of Fire Prevention Week. I also direct the appropriate agencies of the Federal Government to assist in this crusade against the toll of life and property resulting from fires."

Five Albany Firemen Narrowly Escape Gas Blast

What appeared to be a routine assignment for Engine 5 of the Albany, N. Y. Fire Department, at noon on May 24, 1950, when the company was called to Gansevoort and Green streets to guard against possible explosion following collision between a locomotive and a gasoline tank truck, turned into a near catastrophe. Four firemen and two civilians were hospitalized from burns and shock received when the tanker's cargo exploded, and one officer was treated at the scene.

The accident occurred about 12:45 P.M., when a gasoline tractor-trailer, loaded with 5,150 gallons of gasoline and proceeding on Green street, en route to Schenectady, was struck by a diesel switching engine of the Delaware & Hudson Railroad as the driver attempted to cross the tracks ahead of the locomotive.

The impact did not capsize the tanker, but burst compartments in its tank, spilling the gasoline. Neither the driver of the truck nor the crew of the locomotive were injured in the crash. A pickup truck, which also was crossing the tracks at the time, was undamaged, although the collision shoved the tractor against it. Its driver managed to escape before the ensuing blast.

Following the smashup, an alarm brought units of the Albany Fire Department, including Engine 5, in command of Battalion Chief Thomas McGraw. When they arrived, the tanker's cargo was spilling and the area was heavily charged with gasoline vapors. The engine still was in contact with the tanker.

Spectators were ordered away and smoking forbidden. Firemen and railroad workmen also were warned, reports said, not to move either truck or locomotive for fear a spark might set off an explosion. Meanwhile, the crew of Engine 5 had stretched a line and were spraying a heavy pattern of water fog at the point of the impact where the truck and engine were stuck together.

While they were attempting to dissipate the vapors, the explosion occurred. Its cause was not determined. Fire Chief Michael Fleming attributed it to ignition of gasoline vapors by hot coals in the crossing attendant's shanty some 20 feet from the point of collision. Other reports placed the cause as sparks resulting from an effort to release the locomotive from the tanker's side.

The blast caught the firemen without warning. Hoseman Robert L. Rose was knocked down by the blast, which blew off one of his boots. Hosemen Franklin McDonald and Eugene Smith, and Captain Frank A. Evans all received severe burns about the face and hands. Chief McGraw was less severely burned when he ran toward the inferno in the effort to make certain none of the crew was caught.

Patrolman Francis Bulger is credited with rescuing Hoseman Rose. The other fire fighters managed to escape envelopment by the spreading flames, some of them losing helmets and equipment. The 61-year-old crossing watchman suffered burns on the hand and an inspector of the railroad also was burned.,

Chief McGraw immediately ordered a box alarm struck, following by a second alarm to prevent involvement of exposures in the area. En route to the scene the pumper of Engine 8 was involved in a three-way traffic collision which put it out of the fight. None of its crew was injured. Also special called were employees of the Socony Vacuum Oil Company who aided firemen in blanketing the spill with foam.

Radio Recommended for Canadian Departments

A move to strengthen Greater Toronto's peacetime fire defenses by establishing a single radio communication system was recommended recently by Ontario Fire Marshal W. J. Scott.

In a letter to York Township Council, the marshal asked the municipality to consider having a shortwave radio system linked with the Toronto transmitter.

It is believed similar letters will be sent to the 11 other suburban municipalities. At a meeting of fire chiefs in April such a step was considered. The system would be used by fire brigades to call for reinforcements when a fire gets out of control.

Lack of an efficient radio communication system in the past, the marshal said, has resulted in delay of much-needed assistance. The fire marshal's office is now waiting delivery of several short wave radio sets for installation on apparatus and training units.

Fire Chief Ernest Wood of York Township said the radio system may only be the first of several plans on a program to prepare the Greater Toronto area for defense against aerial bombardment.

He said no instructions have been received yet from federal authorities in connection with training civilians for duties similar to Air Raid Precautions during the Second World War.

"But in the event of another war, a civilian fire corps would be better trained and have more duties than the ARP," commented Chief Wood.

Chief Wood said that, if council approved of the system, a transmitter would be set up in the Mount Dennis Fire Hall.

When township firemen require assistance at a fire today, a call is made from the fire car radio to the police station radio transmitter and the office on duty then relays the call for aid by telephone to the fire hall.

—Roy Carmichael.

Seven Firemen, Who Were Washing Away Spilled Gasoline After This Tank Truck Collided with a Switch Engine at a Grade Crossing in Albany, N. Y., Had to Beat Such a Hasty Retreat, When Gasoline Vapors Exploded, That They Left Behind Some of Their Wearing Apparel. Note Two Helmets and Hip Boot on Pavement

Air Force Firemen Killed in B-29 Blast

Seventeen dead, two missing and sixty injured; that was the toll when a B-29 bomber crashed, burned and exploded some 800 yards beyond a runway at the north end of Fairfield-Suisun Air Base, Calif., shortly after 11:30 P.M. on August 6, 1950.

The big bomber, loaded with 8,000 gallons of high-test gasoline, as well as a dozen 500-lb. bombs, had taken off about 11:32 P.M. for what the Air Force described as "a routine training flight."

Moments later, after it was air-borne, the pilot radioed the control tower: "I've got a runaway prop on the No. 2 engine." Then the No. 3 or right inboard engine began running wild. To make matters worse, the landing gear stuck half-way up, adding to the drag.

Faced with this problem the pilot attempted to circle back for a landing. He was an estimated 200 to 400 feet off the ground. He made a tight swing, a half circle of 180 degrees and was 30 seconds away from one of the three runways, but he couldn't quite make it. He came down on fairly level terrain, making a belly skid as the faulty landing gear buckled up.

The heavy bomber gouged a shallow trench for 300 yards before coming to an abrupt stop. But the left wing dipped and dug into the earth. It began to break up and the gasoline fuel in the wing spouted out, and quickly ignited.

Flames were at first confined to the damaged wing, witnesses report. Men broke out of the stricken Superfort and crawled away from the bomber. Some could be seen against the flames, attempting to drag others to safety. Meantime all the post's aircrash trucks and fire fighters, including two large "CD" units (carbon dioxide) and numerous cars carrying volunteer rescuers had converged on the scene.

About 100 feet from the point where the bomber stopped, and across the post's fence, is located a trailer camp where approximately 50 families of Air Force personnel sleep. The occupants of this trailer camp, awakened by the noise and fire, bolted toward a north postgate. Air police, quickly on the scene, attempted to calm the panicky and bring about an orderly evacuation (most Air Force personnel on the post require no warning in the event of a crash, knowing that planes are more likely carrying bombs). They had the area almost cleared when the blast occurred. But there were many caught, mostly those who failed to heed orders and remained as spectators.

As the fire progressed, rescuers fought valorously to free the men still trapped in the huge bomber. It was said that escape doors had been sprung out of line. Firemen were pulling off hose and other equipment and the operators of the carbon dioxide trucks were dragging up their lines when there came a blinding flash and explosion. The tons of gasoline sent a column of flame high into the sky and almost at the same instant, the bombs let go.

The resulting blast was heard and seen in Berkeley and other places miles distant. A crater about 20 feet across by 8 feet deep, was dug into the earth as the plane practically disintegrated.

Everyone within 50 yards of the plane was hurled to the ground. Those nearest were killed outright. Others were rendered unconscious. Bits of hot fragments of the plane rained down on the trailers. Fires popped up everywhere, as near pandemonium reigned.

Seven of the fire fighters were killed instantly. Eight of the plane's 17 crew members were reported killed and two missing and presumed dead. Two passengers in the plane also were killed. Seven airmen, including the pilot and regular co-pilot escaped with injuries; a third passenger walked away unhurt.

The heavier parts of the plane were widely scattered. A nose wheel landed in a field 200 yards away; an engine sailed over a group of trailers, landing into another trailer 100 feet distant. The blast blew off the motor hoods of all automobiles nearby and smashed windshields of others. Blazing gasoline spewed over the area, helping spread the fire in the trailers. Some 40 of them, mostly of wood construction, were destroyed and 20 others of metal, were charred and their contents consumed. Spotty fires also started up in the summer-parched grass in an adjacent field.

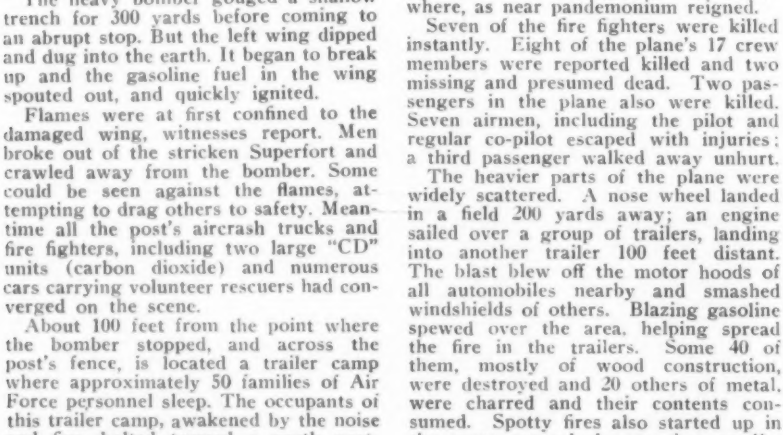
Firemen from the base, those th were not injured, aided by outsid forces from Fairfield, Suisun, Valle and other valley towns, fought thes fires for four hours before controllin them. At daybreak the next mornin the burning trucks were still smolde ing.

As quickly as men could approach th wreckage of the plane, efforts wer made to locate victims. At 4:00 A.M nearly five hours after the bombe landed, searchers were still carryin bodies out of the debris.

Immediately following the blast, cal for aid went out to not only the nearb valley fire forces but to medical au thorities for doctors and nurses.

The roads leading into the base soo became clogged. Extra details of Cali fornia Highway Patrol, air police, c vilian police of nearby towns, and dep uty sheriffs, blocked off all acces roads, permitting only emergency ve hicles to pass.

An inquiry into the disaster was im mediately ordered. It was disclose that one of the casualties was Brig dier General Robert F. Travis, com manding officer of the base.



A Soldier (Right) Stands Guard Over a Heavy Engine Thrown from the Bomb-Laden B-29 Which Crashed Shortly After Taking Off on a Late Evening Flight, August 6, at Fairfield-Suisun Air Force Base, California. The Engine and Other Wreckage of the Plane Is Scattered Among the Debris of the Trailer Camp Near Which the Plane Crashed

British Manual on Atomic Warfare

The British Government has just i sued a pamphlet on atomic warfare t help in the training of Civil Defen workers in Britain. Published by H Majesty's Stationery Office on beha of the Home Office, which is respo sible for the British Civil Defen Corps, a limited number of copies ha been received by British Informati Services, New York, and are availab price 50c.

Based on the visit of a number s scientists to Japan after the two ato bombs in 1945, the pamphlet repr sents exhaustive research carried ever since then.

The manual explains that deaths fro atom bombing are attributable to thr causes. Those are: blast, heat-flash an radioactivity. The percentage of death from those three causes has been ca culated as follows:

As a result of blast:	50%-60
As a result of heat-flash:	20%-30
As a result of radioactivity:	15%-20

The effects of blast and heat-flas have been well known for a long tim and measures to deal with them ar available. Only the radiological aspec is new in warfare and, serious as it ma seem, a full understanding of the effect will help to reduce loss of life and pos sible injury.

The Cover

When chemicals in the San Carlo Calif., burning warehouse of Weste Associates, Inc., let go during a hot fir San Carlos fire fighters fled for the lives, as shown on the cover illustratio Fortunately, all made cover in time.

The warehouse, which was destroye with heavy loss, housed critical ma terials essential to the war effort, it wa said. Initial reports listed the cause o the blaze and blast as possible sabotag but later statements denied this. Com pany officials said the company had bee working on a $150,000 government con tract, but "was not working specifical on military assignments."

Gasoline Fire Spreads Along Stream in Northlake, Ill.

Mile Long River of Fire Fought by Large Force

Northlake, a suburb west of Chicago, was recently endangered by an unusual fire when winding Addison creek was transformed into a mile long river of fire resulting from gasoline spilled from an overturned truck trailer.

The original cause of the fire occurred two hours earlier, when the rear trailer of a two trailer gasoline truck overturned. The vehicle belonged to the same Whiting, Ill., concern that owned the truck involved in the street car-gasoline truck holocaust in which 33 persons perished on May 25 on Chicago's south side.

The tanker driver had turned into North Ave. near the western boundary of North Lake. Traveling east, he came upon two cars parked in the way. In attempting to miss the driver of one of them, the tanker operator swerved his machine, which shot into the parkway. The rear trailer tore loose from its hitch and turned over, spilling out its 3,500 gallon cargo.

As gasoline started draining into a nearby sewer, members of the North Lake Fire Department, who were called, attempted to dilute the volatile liquid with water and speed flushing it down the sewer.

Just how it happened is not determined, but police and fire officials believe that a cigarette discarded by a passing motorist ignited the gasoline on the creek's surface. This was reported at about two hours after the accident.

The fire started near the intersection of North and Prater streets and spread rapidly along the creek waters, to destroy four bridges, bring near-panic to scores of residents living along the waterway, and resulting in the calling of fire fighters from over a wide area.

Two of the bridges destroyed were abandoned wooden structures near the point of ignition. Another bridge was burned two blocks north of Prater street, and the other at Roy street where the spread of flames down the running stream was finally halted.

The fire was brought under control after two hours of strenuous activities on the part of fire departments from Melrose Park, Elmhurst, Maywood, Franklin Park, Hillside and Bellwood, which joined the North Lake firemen in the struggle. Also answering the emergency call was a fire fighting team from O'Hare International Airport. Army men were sent in to augment extra police who were called upon to re-route and handle traffic in major routes in a square mile area. Hundreds of motorists left their cars to watch as black smoke rolled into the sky.

A heavy downpour of rain about 3:00 P.M. aided fire fighters in bringing the blaze under control.

No firemen were reported injured in the battle, but a lineman of the Public Service Company of Northern Illinois was electrocuted while installing a street lighting circuit some five blocks away from the trouble. Inhalator crews worked without success over him for more than two hours.

Firemen Save Longest Wooden Bridge

On Tuesday, June 6, 1950, at approximately 3:00 P.M., the Naval Station Fire Department at Green Cove Springs, Florida, received a report that a section of the Shands Bridge was ablaze. The burning section was on the east side of the draw bridge.

The Shands bridge is 2.7 miles long and is reputedly the longest wooden bridge in the world. It carries automobile traffic on Highway 16 between Green Cove Springs and Orangedale and is heavily used, by naval personnel and civilian workers of the area.

The Naval Station immediately dispatched one 750 GPM pumper and a high pressure auxiliary truck to the scene of the blaze which, whipped by moderately strong north-west winds, was well out of hand upon the arrival of the fire forces.

Fast action by the Naval Station crew aided by assisting fire fighters, confined the fire to a comparatively small area, a section approximately 250 feet long.

The fire-fighting Navy tug YTB-58 and the Navy crane YSD-58 joined in fighting the fire. They were aided by a piece of apparatus from the town of Green Cove Springs and a truck from St. Augustine, which took up station on the east side of the blaze. One piece made the run from Jacksonville and stood fast until the blaze was officially declared extinguished at 8:25 P.M.

D. G. Aid,
Chief of Fire Department,
Naval Station, Jacksonville, Fla.

July Fire Losses

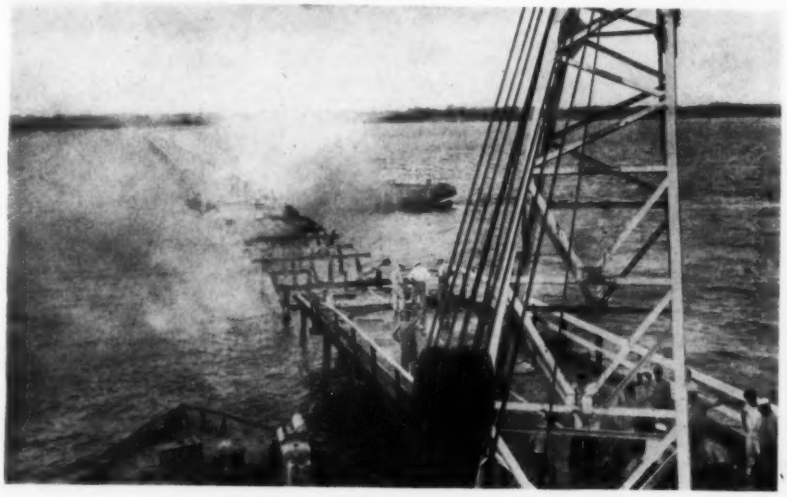
The United States bill for fire destruction rose for the sixth month this year over last year with fire losses for the month of July estimated at $52,980,000, it was announced by W. E. Mallalieu,, general manager of the National Board of Fire Underwriters. This was an increase of 6.8 per cent over July, 1949.

"The steady rise in fire losses represents the destruction of property and national resources vitally needed for the defense and welfare of the nation," Mr. Mallalieu said. "It emphasizes again the responsibility of every citizen and every organization to try to prevent fires that destroy life and waste the nation's resources."

The July total represents a seasonal decrease of 7.2 per cent from the June, 1950 figures. June's fire losses were $57,116,000.

Losses for the first seven months of 1950 reached $420,097,000, an increase of $21,698,000 or 5.4 per cent over the fire destruction for the same period of 1949.

For the 12-month period ending



Shands Bridge, After Fire Was Under Control

July 31, 1950, losses were an estimated $738,826,000. This represented an increase of 9.7 per cent over losses of $672,078,000 reported for the 12 months ending July 31, 1949.

These reported losses under fire insurance policies include an allowance for uninsured and unreported losses.

Arsonist Confesses

Thomas F. Deese, of Hickory, N. C., confessed setting fire to his residence in Hickory, on August 17th, according to Chief of Police Mark L. Little of Hickory.

The admission came about 12 hours after Deese's new two-story home was damaged in an early-morning blaze,with a loss in excess of $10,000.

Hickory police quoted Deese as saying he committed the act to obtain money for his children. He had not been able to provide for his children the necessary opportunities, he told police officers.

Investigating officers reported they believe the house caught fire from kerosene which appeared to have been poured over many parts of the dwelling. They said hallways, rooms, and closets were ablaze when members of the Hickory fire department arrived at the scene, and only a few articles of clothing were saved from the building.

Deese, operator of the City Shoe shop, was taken into custody at the scene of the fire Wednesday morning by officers of the Hickory police department and the State Bureau of investigation.

D. G. SPENCER.

Water Supply Deficient, Dwellings Burn

Two Long Hill, Conn., homes were burned and four barns were destroyed by fire on May 21, as members of the Long Hill Volunteer Fire Department were hampered by the shortage of water, their chief source being a small brook which was at such a low level that full pumping pressure could not be maintained.

First Selectman Wilbur M. Peck Addresses the Graduating Class of the Firemen's School at Greenwich, Conn.

The fire, of undetermined origin, razed the four barns on the property of Louis Lucas, Lake avenue, with an estimated loss of $40,000, and partially covered by insurance.

The Lucas home, less than 100 feet from the barns, was ignited several times during the course of the battle. Sparks caused damage to the roof of a house across the street.

Due to the intensity of the blaze, aid was summoned from Trumbull, Monroe, Stepney and Bridgeport, and firemen fought the fire for more than four hours. The buildings contained a truck, other farm machinery and equipment, and a number of chickens, all of which were destroyed.

TOM MAGNER.

Greenwich Graduates in First Fire Class

The First Firemen's Training School of the Town of Greenwich Fire Department of which Stuart Potter is Chief, completed its two months' course, and issued certificates of graduation to 36 paid and 32 volunteer members of the department. Special service certificates were given to 14 volunteers who covered the outlying fire stations to permit attendance of the paid men from those houses at the School. The presentations were made at a dinner given the firemen on June 27, 1950, at Fire Headquarters, Greenwich, Conn.

The purpose of the School was to conduct special in-service training primarily for the paid personnel of the department. Volunteers, who still make up the greater part of the several fire departments operating within the Town, were welcome, but their attendance was not mandatory.

The School opened Feb. 22, 1950, with a lecture on "Ventilation" by Deputy Chief Thomas J. Collins, New Haven Fire Department. Six sessions were held in March and five in April. The topics and speakers included:

"Detection and Protection of Evidence of Arson: Deputy Fire Marshal Henry P. Crawford, Greenwich Fire Department; "Handling of Arson and Related Cases": Chief John M. Gleason, Greenwich Police Department (Chief Gleason is President of the International Association of Chiefs of Police); "How Fire Spreads in Various Types of Construction and How to Stop it.": Deputy Chief John J. T. Waldron, New York Fire Department; "Public Relations": Roy Ford, Factory Insurance Association, Hartford, Conn. "Operation and Maintenance of Apparatus": Acting Battalion Chief Harry Irwin, New York Fire Department; "Building Inspections," Captain Ross V. Urquhart, Connecticut State Police; "Salvage": William Espey, Superintendent, New York Fire Patrol, aided by Patrolman John Hughes.

Also: "Forcible Entry and Overhauling": James J. Deasy, Retd. Battalion Chief, New York Fire Department; "How the Press Can Aid in Reducing Fire Losses": Managing editor, Bernie Yudain, Greenwich Times; "Masks and How to Use Them": Deputy Chief John O'Loughlin, West Hartford Fire Department, and "Hazards of Heating Ventilating and Air Conditioning Systems" by Everett Fowler, Engineer, National Board of Fire Underwriters.

Chief Potter who, with Town officials expressed pleasure over the success of the venture, is completing plans for the Second Fire Training School to be held later in the year or early in 1951.

Shortage of Water, the Only Source Being from a Small Brook, at Such Low Level That Full Pumping Pressure Could Not Be Maintained, Is the Answer to Why Long Hill, Conn., Volunteer Firemen Were Handicapped in Fighting a $40,000 Fire That Destroyed Four Barns

6 MEN ON A SWAN NECK...

made a mighty powerful fire engine when this pump was in its prime back in the Nineties. Known as a Swan Neck Village Fire Engine, its two folding levers were big enough to accommodate three furiously-pumping firemen on each arm.

"Everything about this engine is first class in every particular," said the Eureka catalog, referring especially to the Eureka Fire Hose which was connected to it.

Of course, that hose couldn't compare with the sturdier article of today which is made to handle the much greater pressures built up by modern pumpers. But you can be sure it surpassed the most rigid requirements of that time, just as does today's Eureka Fire Hose.

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Short Cuts and Gadgets

HOSPITAL FIRE INSPECTION RULES

Chief H. R. Hutchinson of the New Jersey State Hospital at Trenton, N. J., submits a fire inspection set of rules, or check-list, which he uses in connection with the fire protection plan at his Hospital. He passes the idea along in the hope "this plan will prove as helpful to other hospitals," and thereby contribute in preventing such disasters as occurred recently at the Mercy and Effingham Hospitals."

Here is the inspection card used by Chief Hutchinson in connection with his plan, which operates as follows:

Inasmuch as ward personnel at the hospital is required to keep a daily record book and make entries therein at regular intervals, it was felt that it would involve only a matter of minutes to check the items listed on the inspection card and enter a note to this effect. The plan of using such a check list also has the definite advantage of making ward personnel cognizant of fire hazards and aware of their responsibility to protect their patients against fire. "For the minimum of time involved," says Chief Hutchinson, "it has proven a definite aid to our department in our efforts to provide maximum fire protection for the hospital."

In effect, the plan provides three fire inspections every 24 hours and has helped the fire brigade to keep all fire fighting appliances in the hospital in tiptop order; at the same time it has removed many minor but potentially dangerous hazards.

Chief Hutchinson stresses the point that to make the plan completely effective the administration heads or superintendents of the institution must support it with their full authority. In the New Jersey State Hospital that cooperation is provided in full measure, the Superintendent, Dr. H. S. Magee (who countersigned the inspection card) having sent out a directive to all ward personnel notifying them that any dereliction of duty, insofar as following out the procedures in the card event, would be the cause for disciplinary action.

* * *

DID IT END ARSON TROUBLE?

Recently a correspondent suggested a good way to reduce, if not end arson trouble, was to offer a substantial reward for the arrest and conviction of pyros and arsonists.

REWARD!

$500.00

for the arrest and conviction of any person for the crime of

ARSON

in the City of Taft.

BY ORDER OF THE CITY COUNCIL,
C. A. Page, City Clerk.

A peep into the records disclosed the fact that the idea isn't new. A number of communities have tried it, with varying success. One such community was Taft, Calif. Back in 1928, officials of that city printed signs, as reproduced herein, which were posted around the municipality, offered $500 for the arrest and conviction of any person who committed arson in the city.

The reward was made large enough, so the sponsors reported, to attract persons to try to claim it. It was hoped by this means to overcome the previous weakness in arson prosecution of having too little evidence upon which to base the case. In California, at that time, at least, conclusive proof was required in court to have one suspected of such a charge declared guilty.

City officials hoped the signs would do two things: one, either scare away those who planned to set fire to buildings to defraud insurance companies, or two, to prompt residents to try to collect sufficient evidence for convicting the suspect..

Since the idea was tried, no further word has been received from Taft, or any other city which adopted the same plan. Have any of our readers any information or comments?

* * *

CANVAS COAL BUCKET A HANDY "TOOL"

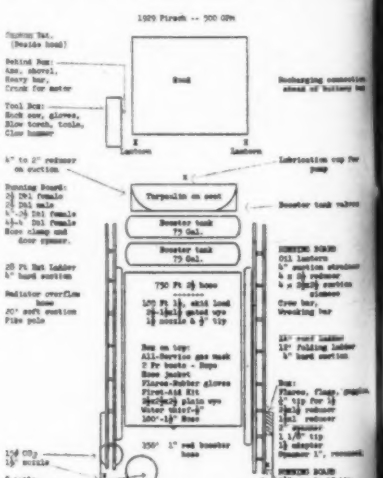
Fireman Michael Marsnick, Hillside Fire Department, Hillside, N. J., reminds us that a canvas coal bag is an excellent thing to have around for salvage work. It can be used in cleaning up, to remove debris, and as a water holder for immersing smudges.

He didn't mention it, but the bag makes a good container for small tools and equipment that must be hoisted or carried to a roof. An accordion fold of a hose length can be packed in it for toting up a ladder or stairway. Further, the bags are easily folded and occupy little room on a piece of apparatus.

* * *

DIAGRAM SHOWS WHAT'S WHAT AND WHERE

The idea of plotting the equipment on a piece of fire apparatus isn't particularly new but now and then we run across a "Short Cut" for teaching crewmen of a pumper or ladder truck


1929 Pirsch -- 500 GPM
Signal Set. (Beside hood)
Behind Pump: Axe, shovel, Heavy bar, Crank for motor
Tool Box: Hook ear, gloves, Blow torch, tools, Claw hammer
Hood
Discharging connection ahead of battery bar
Lantern
Lantern
4" to 2" reducer on suction
Lubrication cup for pump
Running Board: 2½ Del female 2½ Del male 4½-2½ Del female 4½-4 Del female Hose clamp and door opener.
Tarpaulin on seat
Booster tank valves
Booster tank 75 Gal.
Booster tank 75 Gal.
28 Ft Ext Ladder 4" hard section
Radiator overflow hose
20' soft suction Fire pole
750 Ft 2½ hose
500 Ft 1½ skid load 2½-1½ gated wye 1½ nozzle 6 & 7½ tip
Rear on top: All-Service gas mask 2 Pr boots - Rope Hose jacket Fleece-Rubber gloves First-Aid Kit Hockey plain wye Water thief-4" 100'-1½" Hose
350' 1" red booster hose
Hose: Fleece, flare, supplies 4" tip for 2½ Gated reducer 2½x1½ reducer 2" spanner 1 1/8" tip 1½ adapter Spanner 1", removable
1½ City 1½ nozzle
6 pails Chimney chain
2½ Gal. Foam
2½ nozzle 1" tip Hidden Crowd 2½" nozzle 7/8 tip
5 Gal. pump pail
Rear wall: 1 hose spanner strops 1 rope tool 1 hose strap 2½" hose spanners 4" hose spanner-hydrant wrench
Oregon Volunteer Fire Department. Ernest Culb, Chief.
March 1, 1941

"what's what and where" that is especially good because it is readily understood. The latest such idea comes from the Oregon Volunteer Fire Department, Ernest Culb, Chief, and is contributed by avid reader and constant contrib' Norton T. Ames of Madison, Wis.

The sketch tells the entire story. The same treatment can be applied to any other type of apparatus.

WARD FIRE INSPECTION RULES

IN EVENT OF FIRE—Keep CALM—Don't RUN

REMEMBER Fear and Panic can do as much DAMAGE AS FIRE

1. Tested and checked Key in FIRE ALARM BOX.
2. Checked Fire Extinguishers—
   that Nozzle opening is clear—EXTINGUISHERS ARE IN PROPER POSITION AND READY FOR USE.
3. Tested and checked Key in hose CABINETS.
4. Checked Standpipe hose and connections—
   Hose connected and properly racked—Report Leaks.
5. Checked clothes ROOMS FOR FIRE HAZARDS.
6. Checked Mop Closets—NEAT AND ORDERLY.
7. Checked FIRE STAIRWAY and FIRE DOORS—Stairway and Doors are unobstructed.
8. In the event any of the items listed above or any other hazardous condition is discovered—NOTIFY YOUR SUPERVISOR AT ONCE.

NOTE

All Charge Nurses and Charge Attendants shall upon the beginning of their tour of duty inspect Wards for the eight fire preventative items listed above.

When inspection is completed it shall be noted in the Day Book as follows: "Ward Inspected for fire safety."

H. R. HUTCHINSON, Fire Chief.
Dr. H. S. MAGEE, Medical Director

MORE FIRE FIGHTING POWER AT NO ADDITIONAL COST

Compare the QUAKER Fire Hose on the right with the bulky, ordinary hose illustrated on the left. Here's visual proof that Easy-Fold allows ⅓ more footage in truck beds. Easy-Fold enables you to carry greater footage without additional bulk.

Here are other Easy-Fold features!

- **Extra strong specially woven cotton jacket that resists abrasion.**
- **Built-in pressure stamina.**
- **Compounded rubber tube that won't dry out.**
- **Even folding—easier handling.**

Don't be satisfied with bulky, short-life, ordinary hose. Order QUAKER Easy-Fold by calling the nearest QUAKER distributor or write direct to:

QUAKER RUBBER CORPORATION · PHILADELPHIA 24, PA.

Division of H. K. Porter Company, Inc.

Pittsburgh · New York · Cleveland · Chicago · Houston · Atlanta

Western Territory

QUAKER PACIFIC RUBBER CO. · San Francisco · Los Angeles · Seattle

QUAKER RUBBER PRODUCTS

custom made for every industrial use

FALSE ALARMS

Contagious

"Doctor, my son has cholera, and worst of it is, he admits he caught it from kissing the maid."

"Well, well, young people do thoughtless things, don't they?"

"Yeah, but Doctor, I've been kissing the maid myself."

"Too bad."

"And what's more, I've been kissing my wife!"

"What? Oh, my gosh! Now we'll all have it."

Man of the House: "I miss the old cuspidor since it's gone."

Wife: "You missed it before. That's why it's gone."

A dashing young driver named Bill,
Drove recklessly down a steep hill.
Said he: "I'm renowned
For covering ground."
But, alas, now the ground covers Bill.

Secretary: "There is an applicant waiting to see you who says that he used to make his living sticking his arm into a lion's mouth."

Personnel Mgr.: "What's his name?"

Secy.: "Lefty."

Slight Error

When Deacon Smith took a train to New York, the pastor asked him to order a Christmas sign to be tacked over the door of the church. Smith lost the note giving the dimensions of the sign and the inscription that was to be printed thereon, so wired the pastor: "Rush copy of motto and dimensions." A woman clerk in the Western Union office received the reply and promptly fainted. It read: "Unto us a child is born. Eight feet long and three feet wide."

Sue: "I like this summer resort. All the men are so full of passion."

Lou: "Passion, the dickens! This is a health resort for asthma victims."

He who believes that "evening" has the same meaning as "night" should note the effect it has on a gown.

Nick the Barber: "How's the razor cutting? Does it go easy?"

Scott, the Victim: "Well, it's like this, Nick, it all depends on the operation. If you're trying to shave me, it goes hard; but if you're trying to skin me, it goes easy."

Definition Dept.

Lorgnette: A dirty look on a stick.

"Now, frankly," warned the doctor, "I must inform you that this is a very serious operation. Four out of five patients do not survive. Is there anything I can do for you before I begin?"

"Yes," said the patient, "help me on with my shoes and pants."

Division of Labor

After arranging the room and bed of a young male patient, the pretty nurse inquired if there were anything else she could do to make him more comfortable.

"I would like a good night kiss," he leered.

"O.K.," said the pretty nurse, "I'll send up the Orderly. He does all the dirty work."

And then there was the woman who broke her husband of biting his nails—she hid his teeth.

Germs or no germs, kissing is dangerous. It puts an end to a lot of old maids.

To make a peach cordial—buy her a drink.

Drums of Fate

The old fashioned girl who stepped out fit as a fiddle now has a daughter who comes home tight as a drum.

Silas Clam
Lies on the floor,
He tried to slam
A swinging door.

Cussing, plain and fancy, came from a parked auto. A policeman hurried up and wanted to know what all the fuss was about.

Man: "Some so-and-so stole my steering gear."

Cop: "Take it easy, just get up here in the front seat where you belong."

"Wonder which is more satisfied—a man with a million dollars or a man with six kids?"

"A man with six kids."

"Can you prove it?"

"Well, a man with a million dollars always wants more."

A BAR:
Where people go in
Optimistically and come
Out misty optically.

A sugar daddy is a form of crystallized sap.

They were married and lived happily even after.

The height of bad luck—seasickness and lockjaw.

She: "Don't you think dancing makes a girl's feet larger?"

He: "Yes."

She: "I rather think swimming gives a girl awfully big shoulders, don't you?"

He: "Yeah."

Pause.

He: "You must ride quite a bit, too."

An epitaph in a little rural cemetery reads like this:

"Here lie the bones
Of Virginia Jones,
For her, life held no terrors;
Born a maid
Died a maid
No hits—no runs—no errors."

ARTIST'S MODEL—Girl who is unsuited for her work.

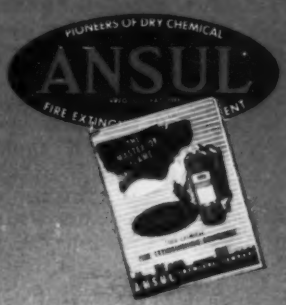
Your Best Protection

FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

GASOLINE • OIL • LP-GAS • NAPTHA
BENZENE • ALCOHOL • LACQUER
VARNISH • SOLVENTS • PAINTS, ETC.

ANSUL
DRY CHEMICAL
FIRE EXTINGUISHERS

They're most dependable too! Years of field service on all kinds of industrial applications has resulted in outstanding design features available ONLY in Ansul Dry Chemical Extinguishers.
FIRE PROTECTION by the dry chemical method has proved *Most Effective* as well as *Most Economical*. And only Ansul offers a complete line of hand, wheeled and stationary dry chemical fire extinguishers. Investigate Ansul Piped Systems for protection of special hazards.
Send for File No. 514. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.



ADVANTAGES

1. Quick, Positive Extinguishing Action.
2. Easier on the Spot Recharge (No special tools needed).
3. No Annual Recharge Necessary.
4. Low Maintenance Costs.
5. ANSUL PLUS-FIFTY Dry Chemical used Exclusively.
6. Long Range Stream.
7. Effective in Winds and Drafts.
8. Stream pattern forms heat shielding screen to protect operator.
9. Listed and Approved by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories.

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS IN PRINCIPAL CITIES IN THE UNITED STATES, CANADA, AND OTHER COUNTRIES

THIS BOOT MAY SAVE YOUR LIFE!

U. S. ROYAL FIREFIGHTER BOOTS

- Extra reinforced ladder shank
- Wide skirted top pulls on or off, FAST
- Extra supple rubber rolls down comfortably
- Rubber yank-hooks
- Boot lining and insole of soft, warm felt
- Super-cushiony insoles
- "Tuftoe" construction
- High-visibility, white, anti-skid, cleated, sole and heel
- Storm King or Short Boot Lengths

U.S. ROYAL FIREFIGHTER COATS

100% waterproof coats of sturdy black rubber with warm, maroon napped lining. Roomy, 2-piece body, raglan shoulders; fly front with instant snap and dee fasteners; roomy outside patch pockets. No stitching in main body; seams cemented, outside gum-strapped. Fully vulcanized after making.

US ROYAL FOOTWEAR

UNITED STATES RUBBER COMPANY
Rockefeller Center, New York

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

FIRE PROTECTION OF AIRPORTS

THE discussion in this Round Table is a continuation of that which appeared in the August issue of FIRE ENGINEERING on fire protection of airports.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the October issue as well.

Readers are invited to send in their comments on this subject to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

R. C. Malmquist, Chief, Minneapolis, Minn.:

We provide fire protection for one airport only — Wold-Chamberlain — which is partly inside and partly outside the city.

Apparatus and equipment utilized are as follows:

1 Seagrave 750 GPM Pumper
1 Seagrave 750 GPM Pumper
1 International Foam Truck
1 Chrysler 500 GPM OCD Pump
1 International Crash Truck
1 Chevrolet 500 GPM Pumper

This apparatus was provided by the U. S. Naval Air Base, in compliance with terms of contract with the U. S. Navy for fire protection.

Apparatus is stationed permanently at the field.

We have our own company of trained firefighters manning this station.

Firefighting personnel of Navy and Army (stationed at field) assist Minneapolis Fire Department in emergencies.

Apparatus and equipment is furnished by the Navy. The City of Minneapolis pays the salaries of our own firefighters.

Northwest Airlines, principal commercial user of the airport, has a contract with the City of Minneapolis for fire protection.

No other municipal department or commission shares in the cost of fire protection.

Practically all hangars and buildings are sprinklered with the exception of two new hangars just completed.

We have other small airports on the outskirts of Minneapolis, but do not give them fire protection. Fire protection from this City is governed by City Council ordinance which requires the posting of a bond and the entering into of a contract.

Fire protection for Wold-Chamberlain Airport has been in effect for several years, or since September 1, 1946. At that time, a contract was entered into between the City of Minneapolis and the Bureau of Yards and Docks of the U. S. Navy granting us the right to use the fire station building, together with the equipment located therein. At that time, a charge was made the City for heat, light, water and sewage disposal.

In 1949 this contract was revised, and the charge cancelled, provided the City furnished fire protection to the Navy portion of the Northern Ordnance Plant just north of Minneapolis, as well as at Wold-Chamberlain field.

Herbert F. Travers, Chief, Worcester, Mass.: The Worcester Fire Department responds with a general box assignment to fires at the airport. One small truck is located at the airport.

Fire fighting personnel are airport employes who are given some training by the fire department. The apparatus at the airport and the personnel are maintained by the Airport Commission.

Our airport is now in the fourth year

HERE IS THE TOPIC

1. **Does your fire department provide fire protection for the airport, or airports, within or near your city?**
2. **What type of apparatus and equipment is utilized?**
3. **Is the apparatus provided by the airport or your department?**
4. **Is apparatus stationed permanently at the field?**
5. **Are the fire fighters trained firemen of your department? If not, are they recruited from the ranks of civilians?**
6. **Do airport personnel assist the fire fighters in emergencies?**
7. **Who pays for apparatus and equipment? Who pays the salaries of the fire fighters if they are stationed at the airport?**
8. **Do the commercial airlines or any other agencies using the airport steadily or with regularity pay any part of the cost of fire protection?**
9. **Does any other municipal department, or commission share in the cost of fire protection?**
10. **Are hangars and other buildings sprinklered?**

of a five-year master development plan. It is now about to construct the hangar and other permanent buildings. The airport is in full operation as to the air strip. Regular flights are scheduled and we probably have twenty-five planes a day plus private planes.

The small fire truck at the airport is one of war surplus vintage. It has several cylinders of carbon dioxide connected to a hose reel, a 300-gallon tank for ready mix foam and some hose with fog nozzles and applicator. There are plans later for a crash truck of modern design. At the present the regular department answers bell alarm calls.

L. E. Halstead, Chief, Youngstown, Ohio: We have one airport in the city and two outside, one of which is the Youngstown Municipal Airport. City fire protection is provided to all. However, the municipal airport maintains their own fire pump and ambulance.

The apparatus used at the municipal airport is a 750 GPM American-La France pumper with a 600-gallon water tank.

The pump is furnished by the city fire department and stationed permanently at the field.

The fire fighters are the regular employes of the airport and have had a very limited amount of training. They work with the fire department in the event of a crash.

All equipment, with the exception of the truck, was purchased with airport funds.

The city pays the cost of fire protection at the municipal airport only, which is a division of the Department of Public Works.

None of the buildings is sprinklered.

Paul P. Heinz, Chief, New Haven, Conn.: The New Haven Fire Department is responsible for providing fire protection for the New Haven Airport.

Regular apparatus assigned to municipal areas is utilized by the airport.

Apparatus is not stationed at the field. We are planning to provide proper apparatus and build a new station on the field.

We expect to recruit one or more civilians who will work with our men. Airport personnel do assist the fire fighters in emergencies.

A plan is under consideration whereby our department will protect the air field and also respond to municipal alarms.

Buildings are not sprinklered.

The New Haven Airport is being developed. It is not as yet a full scale field, but plans are under way to enlarge present facilities. Discussing this matter with the Airport Commission, I suggested that a new fire station be erected on the field, and that our personnel and equipment be located in this station, together with special airport fire fighting apparatus, and that in case of an emergency our men could respond with airport personnel to assist them in extinguishment and rescue work. The field is located in a so-called rural area where house fires are very infrequent. Only in case of an alarm from municipal calls would the airport protection be limited to their personnel, possibly two men. This would greatly reduce the expense of a full crew for airport fire fighting.

Joseph A. Kirby, Chief, Dayton, Ohio: We do provide fire protection for the airports within our city. At government fields specialized crash and foam apparatus is maintained. At the municipal airport regular and foam apparatus is maintained. This appar-

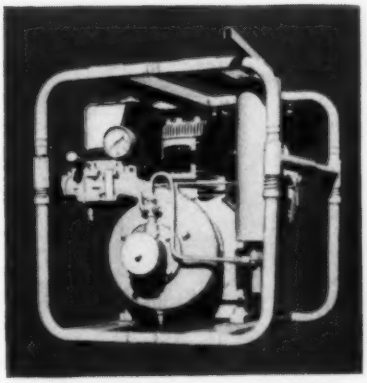
Fight Forest Fires From Moving Truck with a HALE Type FZZ Portable Pumping Unit!

Below are two on-the-spot pictures showing a Hale Type FZZ Portable Pumping Unit fighting a brush fire from a moving truck. The unit can be mounted or carried on virtually any type of equipment, making it extremely valuable for fighting brush, field and forest fires while in motion. Booster tank is used for source of water.

The Hale Type FZZ is a powerful rugged, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping. The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ⅝".

Simplicity in design and reliability are exemplified in the Hale single stage centrifugal pump, bolted direct to a sturdy four-cycle 8.25 HP, single cylinder, air-cooled engine.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. It can be easily carried to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct.



Unit is also available mounted on two wheels or on rubber-cushioned steel channels.

● **Write today for new FZZ Folder.**
Let us know if you want a demonstration.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.
Fire Pumps in All Standard Capacities

PUTS OUT
AND
KEEPS OUT
FLAMMABLE LIQUID
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BULK PLANT FIRES

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AER-O-FOAM ACTS QUICKLY...
STOPS LOSSES

In a matter of seconds Aer-O-Foam forms a thick, tough, long-lasting, air-tight blanket of foam that snuffs out flames . . . insulates threatened areas . . . prevents flashbacks.

Get the complete details. Write or call today for descriptive literature.

NATIONAL
FOAM SYSTEM
WEST CHESTER, PENNA.

atus is provided by the airport and is stationed permanently at the field. It is manned by civilian fire fighters. The city pays salaries of these fire fighters.

Hangars and buildings are sprinklered.

Allie A. Feldman, Chief, Denver, Colo.: The Denver Fire Department protects the airport from fire. A 500-gallon Bean high pressure and a 500-gallon pumper, also carrying 400 gallons of water and 100 gallons of foam solution to be metered together, are provided by the Denver Fire Department.

Personnel are trained members of the Fire Department.

Some of the airport personnel are trained to assist and all are familiar with the use of extinguishing equipment.

The City and County of Denver procures and maintains apparatus and provides payment of the salaries of the members of the Denver Fire Department who are stationed at the field.

The largest building constructed during the war by the Federal Government is entirely sprinklered, and also one other building occupied by the United Airlines. Two small metal, and one ordinary constructed hangars are not sprinklered, as well as two smaller buildings. The Administration building is not at present, but it is the city's intention to install sprinkler equipment in the immediate future.

P. J. Daly, Chief Toledo, Ohio: The Toledo airport is a municipal airport located about six miles from the Toledo city limits. The Toledo Fire Department responds to all calls from the airport because it is owned by the city.

Buildings are not sprinklered.

John F. McDonough, Chief, Boston, Mass.: The Boston Fire Department does provide fire protection for the airport of Boston.

The apparatus in service at Logan Airport consists of two Army type No. 155 crash trucks, one carrying 100 gallons of foam and 1000 gallons of water with 150 gallons of foam in reserve. The second carries 1000 gallons of water only. It also has an Army type No. 125 truck carrying 300 gallons of water to 30 gallons of foam, with a reserve of 500 gallons of foam in reserve, and a Browning crash boat, 63 feet in length, powered by two 625 horsepower engines. The above apparatus is provided by the airport and stationed permanently on the field.

The personnel are commanded by a past member of this department of five-and-half years service. Salaries are paid by the State of Massachusetts.

Hangars and buildings are sprinklered.

Thomas J. Phelan, Chief, Trenton, N. J.: There is only one airport close to us, and that is the Army and Navy field in Ewing Township. However, they have their own protection in case of fire. However, in case of a large fire, we would provide the necessary help.

H. D. Demonbreun, Chief, Nashville, Tenn.: Berry Field is owned by the City of Nashville. A regular fire com-

Don't Jump—Wait for the Firemen!

When an early morning fire involved a 3-story wooden hotel in Oakland, Cal., Jacinto de Leon, an occupant of a top floor room, walked along a ledge of the burning structure to dodge flames and smoke. Fortunately he heeded shouts of policemen and firemen not to jump and was brought safely down a fire ladder, uninjured. The fire for which three alarms were sounded, injured three firemen, damaged the hotel and thirteen business establishments, and forced sixteen residents to flee to the street. Over 100 firemen manning twenty-one pieces of apparatus fought the blaze which caused estimated loss of $200,000.

pany paid from airport revenue is stationed at the airport permanently. This company is not directly connected with the Nashville Fire Department, and is not under our supervision. We would, of course, furnish assistance if needed.

Apparatus consists of a pumper and crash truck provided by the airport.

Only in case of extreme emergency would airport personnel assist the fire fighters. Assistance would be furnished by the Nashville Fire Department.

The airport is operated under revenue derived from rentals. The airport pays for apparatus and salaries of employees.

Hangars and buildings are sprinklered.

Dan P. Donahue, Chief, Peoria, Ill.: The Peoria Fire Department provides fire protection for the local airport. We use a 1000 GPM pumper equipped with booster tank and foam equipment which is stationed at the Central Fire Station.

Airport personnel assist the fire fighters in emergencies. The Reserve Air Force members have a similar fire truck.

Buildings and hangars are not sprinklered.

C. A. Middlekauf, Chief, Houston, Tex.: The Houston Fire Department provides a high pressure fog and crash truck for protection of the local airport. It is stationed at the airport and manned by Houston firemen.

Buildings are not sprinklered.

Ninnian Higby, Chief, Detroit, Mich.: We do provide fire protection for the airport. Foam and fog equipment is utilized.

The airport has a Cardox truck stationed in one of the hangars and manned by employees.

Our apparatus is not stationed on the field.

The City pays the salaries of fire fighters.

Buildings and hangars are sprinklered.

Howard Dey, Chief, New Orleans, La.: The New Orleans Fire Department supplies the personnel and the airport the apparatus, which consists of a Bean high pressure pumper and a 250 GPM Chevrolet pumper. This apparatus is stationed at the field.

The Airport Commission pays the salaries of fire fighters.

Buiidings are not sprinklered at the present time, but a contract has been let for the same.

James T. Blamey, Chief, Spokane, Wash.: We have two municipal airports, one within and one outside the city limits.

We supply fire protection to both airports. Apparatus utilized consists of service trucks, pumpers and boosters. The airport outside the city has a pumper stationed there manned by airport employees.

Hangars and other buildings are not sprinklered.

Frank Vernotzy, Chief, Akron, Ohio: We provide regular running equipment to the airport in the event of a fire. Airport personnel assist the firemen when needed.

All commercial lines have moved from our city port to the Akron-Canton port about eighteen miles from the city. However, we have a Navy base at our city port. The Navy maintains a full-time fire department equipped with a crash truck, two engines and a ladder truck.

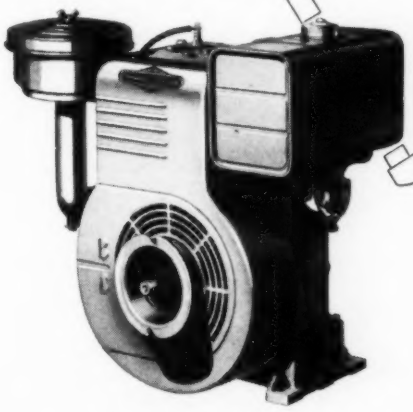
The city and the Navy have excellent working arrangements in cases of emergency at the field or vicinity where aircraft are involved.

Hangars and other buildings are sprinklered.

YOU CAN BE SURE OF UNIFORM

Quality

IN BRIGGS & STRATTON ENGINES



The most modern machines and tools for volume production with watch-like precision (many of them developed by Briggs & Stratton engineers), plus constant check and rigid inspection, are used to maintain uniform quality to meet the high exacting standards established by Briggs & Stratton — the result of the engineering and manufacturing experience gained in more than 32 years of continuous production, and the building of more than 4¾ million single-cylinder, 4-cycle, air-cooled gasoline engines.

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In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

World Wide Fire News

By Roi B. Woolley

Coast Guard Finds No Sabotage in South Amboy Blast

A Coast Guard board of investigation has been unable to determine the actual cause of the munitions explosion at South Amboy last May 19, but it does not "exclude sabotage as a possible cause." The explosion killed 31 and injured 202 and caused heavy property damage.

Most probable cause of the disaster was the accidental detonation of a case of anti-tank mines, accordiing to the report, which sharply criticized the Ohio munition maker and the literage concern handling the shipment. The munitions company had certified the shipment of anti-tank mines to be in compliance, with I. C. C. regulations "when such appears not to have been the fact." In its criticism of the literage concern, the board noted that its personnel had failed to remove from South Amboy's "powder pier" two loaded lighters after having been ordered twice to do so by a Coast Guard inspector.

It was disclosed in the 26-page report that the type of land-mine involved in the disaster had been discontinued by the Army in 1942 as "unsafe."

Recommendations offered in the report included one that requires an authorized inspector to certify that explosives are in compliance with regulations and safe for shipment to vessels, and another that the loading and unloading of commercial munitions shipments be handled by a special loading detail having no other duties and under the direction of an explosive supervisor holding a special certificate. Another recommendation was that an application for handling 500 pounds or more of Class A explosives in a loading or unloading operation be made five or more days in advance, and that a copy of the application be given to civic officials with jurisdiction over the transfer point. On this detail, the report pointed out that the City of South Amboy had at the time of the disaster only one ordinance covering the shipment or storing of explosives. The ordinance, the report said, made it unlawful for any person or corporation to keep or store more than one carload of explosives within the city limits without a permit from the Mayor and Common Council. No permits were requested of the City by any person and none was issued, it was said.

* * *

Underground Shelters Urged on New Yorkers

As New York's civilian defense program unfolded, and action quickened, suggestions on how to meet a threatened atomic bomb atttack multiplied. One called for the construction of huge underground parking places, readily convertible to A-bomb shelters. Also suggested was that the city build the long-talked about Second Ave. subway system, which could be utilized as a single giant shelter if the city ever came under attack.

Critics of the ideas ask what sort of shelters will be available now, while these remedies are being built? Meanwhile, studies are on to locate existing safety areas.

Incidentally, Fire Commissioner Frank J. Quayle and the Staff of the New York Fire Department have asked for additional millions to be spent on the fire defense preparedness program.

* * *

Will They Ever Learn!

The driver of a truck carrying three 55-gallon drums of carbon disulphide was arrested August 10 on a charge of transporting a dangerous chemical through the Holland Tunnel. The employing firm paid the fine of $250.

The chemical was the same as that which caused the blast in the same Tunnel on May 13, 1949, injuring 60 persons and causing the death of a New York Battalion Chief with property damages of $600,000. A motor trucking firm was indicted on six counts by a Federal grand jury and paid $50,000 in damages.

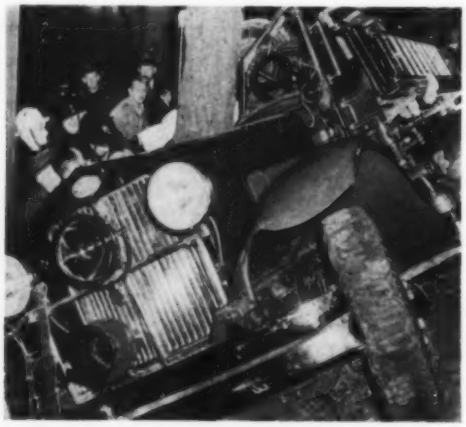
The recent offender was arrested as he left the New York tunnel when a Port Authority police sergeant noted the carbon disulphide, which is prohibited by state law from being transported through tunnels. The excuse given by the trucker was that the blame rested with a dispatcher who had failed to route the truck by bridge.

* * *

Search of Foreign Ships as "Trojan Horses" Started

Taking no chances against "Trojan Horse" ships that might be carrying atomic bombs, security officials of San Francisco and New York and other ports have instituted search procedures on all foreign ships, particularly those of communist countries entering those ports.

DON'T WAIT



LET US MODERNIZE YOUR OLD APPARATUS BEFORE SERIOUS ACCIDENTS OCCUR . . .

Old apparatus just doesn't have the road-ability of today's trucks. Our specialty is to bring old, but still useful, apparatus thoroughly up-to-date in every respect—wheels, brakes, body design changes, fog, hi-pressure—in other words—we make a modern truck out of the old—and for far, far less cost than a new one.

We design and build "custom-made" apparatus to fit your own ideas and needs. Consult us on either or both modernization or specially designed new apparatus.

EDGAR ROAD TANK WORKS
LINDEN NEW JERSEY
NOT HOW MUCH BUT HOW WELL
U.S.A.
SQUAD TRUCKS
PUMPERS
AIRPORT CRASH TRUCKS
INDUSTRIAL FIRE TRUCKS
HIGH PRESSURE FOG ENGINES

It will help if you mention FIRE ENGINEERING *when writing advertisers*

The first to be searched in New York was the Polish motorship "Batory," which previously made the headlines when it transported Eisler, the convicted Communist, out of the country. The four-hour search by 23 customs agents was reported limited to the ship's holds and paint lockers. Nothing suspicious was reported found.

Meanwhile, the new government loyalty check to prevent Communists from shipping on American merchant vessels went into effect and, on the Coast, inspectors planned to board and examine all foreign ships as they entered the three-mile limit. The inspectors would carry Geiger counters, it was said, although newspaper accounts of the search for atomic missels claimed that the only worthwhile device for locating atomic bombs aboard ship is the plebian screw driver. It is said any enemy could hide and shield such a weapon against detection by radioactive counters and any search to be effective must include opening up containers.

* * *

Munition Plane Cracks Up—Crew Dodges Blast

A twin-engine Marine transport plane made a crash landing in havy fog near Oklahoma City on August 4, and virtually disintegrated after all six crew members sprinted to safety.

Loaded with secret explosives, the C-46 was coming in for an instrument landing when one engine failed. The craft hit on its belly in a muddy field east of Tinker Air Force Base and as the crew ran for safety, the dead engine burst into flame. Within seconds the fire touched off an explosion that shook the countryside for miles around. The explosions and fire attracted thousands of Oklahoma City residents to the scene before road blocks could be set up. Fire fighters were not permitted near the scene for three hours while the blasts continued. No pictures were allowed to be taken, nor were crew members allowed to talk with reporters. The night shift at the giant Tinker maintenance base and plant halted operations momentarily. Twenty-five explosions within half an hour shattered the crippled transport.

* * *

Hot Off the News Ticker

A gas storage tank in the center of Santiego, Chile, exploded August 7, injuring 19 persons and causing damage estimated at 1,000,000 pesos (about $170,000). Blast caused panic among crowds that thronged downtown area. Many windows were smashed. . . . When 44 cars of an eastbound Northern Pacific Railway freight train jumped the track near Hebron, N. D., a spectacular fire resulted which destroyed the cars, the Occident grain elevator and a railroad section house. The Occident lumber yard was damaged. The accident occurred as the train was passing the Hebron station. Most of the cars were loaded with oil and gasoline and fire broke out almost at once. The loss was not reported . . . A blazing Navy plane with a crew of eight dumped 100 smoke bombs along the waterfront of Corpus Christi, Tex., as its streaked for its base after fire was discovered. The plane landed safely and the fire was extinguished, but there was plenty of excitement along the waterfront. . . . The entire market district and more than 2,000 homes of Balikesir, a major

BE PREPARED
ORDER A LARGE SUPPLY OF
INDIAN FIRE PUMPS
NOW!
PROTECT PROPERTY
GUARD LIVES!
We must face the realities of the existing situation and be ready for any emergency.
INDIAN FIRE PUMPS are first line of defense against incendiary attack. Air raid wardens, fire departments, war plants, forest rangers and private citizens need plenty of these portable, clear water extinguishers.
Nozzle is adjustable for powerful, straight stream or fine spray. Big, rust proof tank holds 5 gals. of water. Civilian defense organizations were equipped with thousands of INDIAN FIRE PUMPS during the last war.
Don't delay! Send in your order NOW. We will ship immediately.
Air raid wardens of New York City, each equipped with an INDIAN FIRE PUMP, parade during World War II
Agents Wanted
FOR DESCRIPTIVE INFORMATION ON THESE FAMOUS FIRE EXTINGUISHERS WRITE TO
D. B. SMITH & CO.
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PACIFIC COAST BRANCHES:
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Duke Equipment Co.
297 Duke St.
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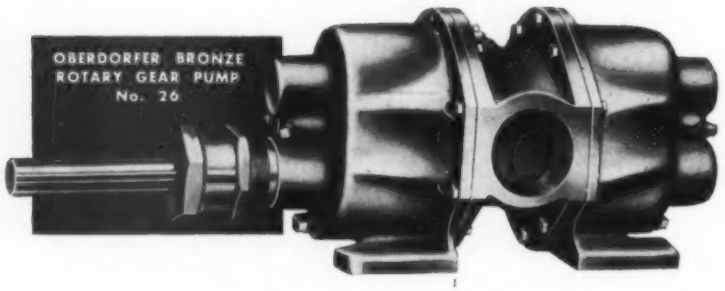
110 Alexander St.
Vancouver, B. C., Canada

military center in Western Turkey, were razed in a fire which reportedly started in a fireworks shop and was spread by a high wind. Loss was heavy . . . At least one woman perished in a fire that razed Singapore's largest rubber factory. Police said blaze was set by Communists. Rescue workers dug through debris of the huge Aikhoe plant which employ nearly 1,000 persons, in search of more victims. . . . Residents of San Diego, Calif., were shaken by five earthquakes, toward the end of July. Tremors hit the Imperial Valley, but no structures were seriously damaged. Firemen had little to do. . . . A spreading three-day-old forest fire cut off two French villages and destroyed more than 2,500 acres of valuable cork oak trees in the heart of the Maure Mountains of Southern France. . . . Two workers were killed and 15 injured when an explosion wrecked a workshop of the Fiat automobile plant in Turin, Italy, early in August. Police investigated the blast thought to have originated in hydrogen containers. . . . Reports indicated that over 1,000 persons of Columbo, Ceylon, who were made homeless by floods last year, lost their homes again August 12, 1950, when fire destroyed their temporary huts. . . . Art works valued at more than $100,000 were destroyed by a recent fire in the customs house at Ciudad Trujillo, Dominican Republic, August 8. Listed among the treasurers were El Greco's "St. Bartholomew"; Van Dycks "Sacrifice of Abraham," and paintings by Goya and Murillo. . . . A Navy attack plane simulating a carrier landing crashed into a group of flight student spectators at Barin Field, Ala., August 10, killing a Navy officer and injuring three others. The pilot of the plane escaped injury. . . . British intelligence officers, worried by a dozen unexplained but suspicious fires and other accidents aboard, or related to Naval craft, swarmed through the Royal Naval base at Devonport, Eng., August 10 last in an attempt to find out who sabotaged a boiler tube on the 23,000-ton carrier Illustrious. . . . Two fuel tanks plunged from Airforce jet plant while the pilot was flying over Pennsburg, Pa., his home town. One tank fell on a farm and the other landed 100 yards from a home and exploded. . . . The wife of John H. Grant, who was convicted on six counts of attempted murder and faces a possible 120-year sentence, was given a divorce. Grant was accused of planting a homemade gasoline bomb in an air line April 17 in order to kill his wife and two children. The bomb, hidden in a suitcase, burst into flames on the ground before it was put into the plane.

YOU CAN TERMINATE OVER 50% OF ALL FIRE CALLS USING ONLY

OBERDORFER

Booster Pumps



The records of many departments show over half of all calls satisfactorily terminated by Oberdorfer Bronze Rotary Gear Booster Pumps alone, with little or no fire or water loss. These pumps held many more of those calls in control the few minutes until heavy pumpers went into action. They provide water and pressure just as fast as a fireman can get to a fire.

For all their usefulness, Oberdorfer Booster Pumps are surprisingly inexpensive, from $55.00 for a 50 G.P.M. size to $172.50 for the 150 G.P.M. size illustrated.* We have been making bronze gear pumps since 1896, and their quality is attested by the hundreds of departments that have used them for years.

*Slightly higher west of the Rockies.

Prices subject to change without notice.

PERFORMANCE DATA — No. 26 PUMP SHOWN ABOVE

Pump Shaft RPM	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'-1½"	15'	150

For complete specifications of this and other Oberdorfer Booster Pumps, and name of your distributor, write:

FIRE PUMP DIV., OBERDORFER FOUNDRIES, INC., Syracuse, N. Y.

News of the Manufacturers

More Power for FWD Pumpers

Increasing both power and speed in its Model F75T 750 gallon per minute pumper and its F50T 500 gallon per minute pumper, the Four Wheel Drive Auto Company, Clintonville, Wis., has just announced a change to the 140-GZB fire engine motor.

The new motor has ten more horse power and 25 lbs. ft. more of torque than the previous standard engine. It develops a maximum torque of 435 lbs. ft. and 200 maximum brake horse power.

A dual ignition valve-in-head engine, the 140-GZB fire engine motor has a piston displacement of 554 cubic inches, a 4⅝ inch bore and 5½ inch stroke.

Standard FWD fire engine models range from 500 gallons per minute to 1,250 gallons per minute pumpers and include 85 foot aerial ladder truck-trailer combinations.

M-S-A Announces New Voice Powered Maskfone

Direct telephone contact between wearers of gas masks or breathing apparatus over short or long distances is now possible with the new M-S-A Maskfone, announced by Mine Safety Appliances Company, Pittsburgh 8, Pa.

The M-S-A Maskfone is powered by the speaker's voice, and requires no batteries or other external power source. The new product permits the transmission of orders to individuals on the job, enables the relaying of immediate reports on job conditions in toxic atmospheres, and expedites operations with increased safety.

The complete M-S-A Maskfont assembly, including transmitter, earphones with head harness, hand set, and 125 ft. of cable on revolving reel, is adapted for use with all M-S-A respiratory protective equipment employing the M-S-A All-Vision Facepiece, when equipped with the company's Cleartone Speaking Diaphragm. The instrument is approved by the U. S. Bureau of Mines for use with the M-S-A Chemox Oxygen Breathing Apparatus, Demand Oxygen or Air Apparatus, Canister Gas

Masks, and Hose Masks. Variations of the assembly are available where adaptation to individual installations is required.

New Foam Charge for Solvent Fires

With the ever-increasing use of alcohol, acetones and other highly inflammable specialized chemicals throughout the country, industrial plants will be interested in a new development by National Foam System, of West Chester, Pa. It is National "99," a new foam charge for special risks involving alcohol, ether, esters, acetone, and related solvents.

National "99" does not disintegrate upon contact with alcohol, acetone, ether and other polar solvents. At the same time, it is equally effective on petroleum products.

Available in packages for use in two and one-half gallon extinguishers or 40-gallon engines, it is also supplied in 50-pound pails for continuous foam generator use.

Etxinguisher Stickers for Windshields

To help promote its line of dry chemical fire extinguishers, the Ansul Chemical Company, of Marinette, Wis., has just distributed windshield stickers to be pasted on the windows of trucks and buses of its customers. The stickers, which have white lettering against a red and black background, announce that the vehicle is equipped with an Ansul fire extinguisher and that the driver is pledged to render whatever aid he can in any fire emergency.

Some of the stickers have gum on the printed side, for viewing from the outside, while others are gummed on the reverse side, so that they can be read by occupants of a bus or other passenger vehicle.

New Lightweight Ladder Pipe

American - LaFrance - Foamite Corp., Elmira, N. Y., has announced production of a new, lightweight Alfco Ladder Pipe which operates in both lateral and vertical positions. It weighs only 29 pounds and can be operated either manually or by remote control. One fireman can carry it.

The manufacturer claims that the availability of this newest fire-fighting unit is designed to further advance the most modern fire-fighting technique.

Its use adds considerably to the efficiency of metal aerial ladders as water towers, since the ladder pipe water stream can be directed not only in a sweeping arc across roof tops, but can be quickly turned also into a window opening or area below, without changing the position of either the aerial ladder or the ladder pipe attachment.

This ladder pipe has a quick-acting attachment and a removable stream straightener which can be easily detached and replaced when necessary.

Canadian Fire Chief's Conference

The usual autumn fire school at the University of Toronto this year is being converted into a two-day Fire Chiefs' Conference at which addresses and forum discussions will be on a management level, according to Fire Marshal William J. Scott. The dates set for the Conference are October 26-27.

to Spare!

FOR FIRE-FIGHTING

No other electrical system matches the performance of Leece-Neville AC-DC Alternator Systems.

For fire trucks there are Alternator Systems rated at 7 volts, 80 amperes and at 14 volts, 60 and 100 amperes.

A transformer is available providing 110 volts AC for operation of flood lights, extension lights, electric sheet or other accessories up to 250 watts.

For the Chief's car, a Leece-Neville Alternator System delivers 25 to 35 amperes idling and 80 amperes from 18 mph. *A must* for 2-way radio.

Specify Leece-Neville when ordering new equipment.

For all the facts, just write Dept. 18,
The Leece-Neville Company, Cleveland 14, Ohio
Pioneer and STILL Quality Leader

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CAIRNS
DROP-BRIM HELMETS
GIVE YOU
TOP QUALITY
AT
LOWER COST

No. 550 — SEAMLESS

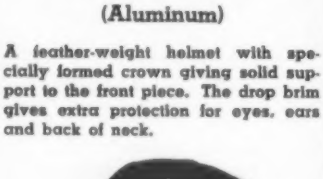
(Leather)

A drop-brim style with seamless crown. Applied ribs have steel reinforcement. A tough, long-wearing leather helmet at lower cost.

No. 700 — STREAMLINER

(Aluminum)

A feather-weight helmet with specially formed crown giving solid support to the front piece. The drop brim gives extra protection for eyes, ears and back of neck.



No. 720 — COMMANDO

(Flint-Flex)

A utility model of CAIRNS Flint-Flex plastic. Safe and durable, with close-fitting front piece and new "snap-in" lining which makes installation or removal of the complete lining assembly a matter of seconds.

Write for Catalog 331

CAIRNS & BROTHER
(ALLWOOD), CLIFTON, N. J.
Outfitters to Firemen Since 1836

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Double Parker Asks Wrong Question

Hoboken, N. J., fire apparatus was returning from a two-alarm fire the night of August 14, when they came to a double-parked car blocking a one-way street.

Fire fighters asked the occupant of the road block to move his car. Instead, they reported, the man jumped on the running board of the fire truck and truculently asked: *"Where d'you think you're going—to a fire?"*

He picked on the wrong prospects! Police booked the man, one Nicholas Piantieri, 32, of Mountain View, N. C., on a disorderly conduct charge and slapped a $100 fine on him.

* * *

And There's a Shortage of Apparatus!

With the nation's fire service wondering where and how it can scrape together apparatus and equipment to meet the growing demands being made upon it, this choice news tidbit contributed by roving correspondent, John Jebens, rates top billing.

About a mile north of the little village of Lockbourne, Ohio, a "valuable piece of fire apparatus, complete with pumper and other equipment" (as the Columbus paper hath it) is deteoriating on a weed-covered lot "while village officials squabble over the advisability of establishing a volunteer fire department."

The pumper which, from the picture, looks like a fairly modern standard type cab and tank job, it is said, was acquired in 1943 from the civilian defense program and has never been used to fight a fire. In fact, for the past two years, the rig has been virtually abandoned on the vacant lot adjoining the home of a Russell Bodkins on Canal Road.

Queried about the "roadside monument," Ronald McMillan, president of the Lockbourne Council, said: "The village has neither the money nor the manpower to operate a volunteer fire department. I don't know what we're going to do with the pumper." He'd like to see the rig sold to the Hamilton Township Fire Department, but other councilmen disagree and want to organize a volunteer fire fighting group" in hope of reducing insurance rates."

Lockbourne is located in Hamilton Township, which has a volunteer fire department, now stationed at Obetz. The Hamilton vols, said to be "one of the best equipped fire outfits in the county, can make the six mile run from Obetz to Lockbourne in eight minutes." The township department also maintains an emergency squad, and this force, many town folks feel, is sufficient to care for the village needs. Nobody has apparently figured out what eight minutes might mean To a Lockbourne resident whose place was on fire).

It is disclosed that agitation for a Lockbourne fire department appears to stem from a squabble over a decision by the township trustees to house the township fire apparatus at Obetz. Some of the Lockbourne residents have an idea the fire apparatus should be stationed at Lockbourne or at a more central location instead of Obetz, which is up in the northeast corner of the township. But, say the trustees, Obetz has the manpower to operate a department on a 24-hour basis and it agreed to erect a fire station if the apparatus is housed there. The township department now includes four pieces of equipment, a 75-ft. aerial ladder, emergency squad and communication car.

Deponent saith not just how and through whom the wartime pumper was secured.

* * *

W. A. McDonnell, St. Louis, Contributes These Gems

HARDWICK, MASS.—Hardwick's volunteer fire department is in the apple business. The town's 11 firemen hope to make enough money from their orchard to pay for $1,100 worth of new equipment.

BENNINGTON, VT.—Volunteer Fireman John Proud said he wasn't so very proud when he responded to a false alarm pulled by his 6-year-old son.

WICHITA FALLS, TEX.—G. W. Worth, Jr., visiting fireman from LaGrange, Tex., volunteered to go along when an alarm came in as he talked to the boys in central fire station here. Worth is six feet nine inches tall and claims to be Texas's tallest fireman. The fire was in a youngster's playhouse. The door was about three feet high. Worth wasn't of much worth in fighting the fire.

* * *

Mutual Aid District Bill Goes to Truman

Congress on August 8 gave final approval to three District of Columbia bills, including one for a coordinated fire protection setup in the Washington metropolitan area, and sent them to the White House.

The fire protection bill was drafted by fire officials of the District and adjoining area. It would clear the way for District Commissioners to make agreement for mutual assistance with nearby Maryland and Virginia communities.

This measure would give the metropolitan area a force estimated at about 125 fire companies with approximately 4400 men. The bill was needed to permit effective civilian defense plans.

A major effect would be to assure District firemen the protection of hospitalization and retirement benefits while on duty beyond the District line. Under existing law the city's firemen are not entitled to hospital and retirement benefits if injured on out-of-town runs. Thanks, IRVING JOHNSON.

* * *

Bayport Vamps Practice on the Real Thing

Practice makes perfect, says the Bayport, (L. I.), Volunteer Fire Department, particularly where you have the real thing to work on.

The Bayport vamps were gathered in their headquarters recently on Bayport's main stem, doing a bit of limbering up in preparation for a forthcoming firemen's tournament, when a passing motorist stopped to inform Chief Roger Renner: "There's either a red light in

that building or else the place is on fire."

The Chief, and the vols looked, and found a roaring blaze cooking in Shand's Bayport Market, a three-story frame building, next door.

All hands "practiced" for an hour before the fire was extinguished. Damage was reported at $25,000.

* * *

Bull, Flimsy Fence, Flaming Tree Spell Trouble

Out Independence, Mo., way there was a bull. There was also a fence. The fence was flimsy—the bull wasn't. And so Fire Chief Tom Pollard had to make a decision, which was—to let the fire burn.

Seems that not long ago children with firecrackers started a blaze in a hollow tree in a pasture on the edge of the city. Chief Pollard and his fire fighters were called. They rolled up and started laying out hose.

Then Cork Daniel, red-haired fireman, saw the bull coming. "He was big," said Fireman Daniel (who mebbe remembered he had red hair). And only a flimsy, rickety fence separated the animal from the bright new, shiny red fire truck! Q. E. D.?

"Let's get outa here!" shouted Chief Pollard—and all hands picked up and pushed off in record time.

The fire in the tree was still burning next day! Thanks, IRVING JOHNSON.

* * *

Hot Off the Tape

Six persons burned to death July 15 when a truck and a car collided on a narrow bridge eight miles south of Mansfield, O. . . . A 56-year-old farmer's widow built a large bonfire of old clothes, paper cartons, etc., near Rockford, Ill., on July 15th, then dived into it head first, burning herself to death. . . . Two persons were killed in a mysterious explosion that pitched a tavern high into the air near Joliet, Ill. . . . Four tons of dynamite exploded at the Auglaize Limestone Quarry near Defiance., killing three men and injuring another. Blast came as men were putting dynamite into holes drilled for blasting. It shook houses in Defiance, 11 miles away, and was heard 20 miles distant. . . . Chicago police searched for an arsonist who is believed to have set five fires on the northwest side of the city. All fires originated under porches or in garages. . . . In East Moline, Ill., officials revealed that the housewife who admitted starting the fire that killed 41 persons in a Davenport, Ia., hospital last Jan. 7, has been released from the East Moline State (mental) Hospital. The woman was released as "improved" May 11, and permitted to return to her Rock Island, Ill., home. She admitted starting the tragic fire at St. Elizabeth's Hospital in Davenport. . . . Muscatine, Mich., children who have dreamed of a ride in a fire truck got their wish. Fire Chief Paul Meerdink began giving rides July 5th, on the city's new $15,000 fire truck, which was the gift of a Muscatine business man who stipulated that the kids must get the free rides. . . . A Newark, N. J., motorist says there ain't no justice. After escaping serious injury in a collision, he was bitten three times by his dog, which had been riding with him. When an ambulance arrived to take him to the hospital, it caught fire. . . . In Harrison, N. Y., Fire Chief George Archer warned motorists that in the future persons parking a car in a

Fast Acting Fire Watchman

on duty 24 hours a day...
AT EACH FIRE HAZARD POINT

Let C-O-TWO safeguard your property from fire, even if you have a night watchman on duty. With a C-O-TWO Combination Smoke Detecting and Fire Extinguishing System you have an automatic, round-the-clock fire watchman that simultaneously guards each fire hazard point. The first trace of smoke in a protected area is drawn through pipes to a smoke detector. Immediately an alarm sounds . . . then fast, clean carbon dioxide gas fully floods the stricken area . . . the fire is out before it has a chance to spread and cause extensive damage.

Actual fire tests made by the Underwriters' Laboratories, Inc. show that fire detection with this type of smoke detecting equipment is much quicker than other methods . . . because usually there is smoke or smoldering before flames break out.

There is no water damage, no lingering odors with carbon dioxide . . . only damage is that actually caused by the fire itself. Carbon dioxide is clean, dry, non-conducting and non-damaging . . . harmless to finishes, materials and equipment. The fire is out in seconds, with hardly any interruption or commotion.

Remember fire doesn't wait . . . let an expert C-O-TWO Fire Protection Engineer advise you on your fire protection needs now, before fire strikes. Write today for complete free information!

C-O-TWO

C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1 • NEW JERSEY
Sales and Service in the Principal Cities of United States and Canada
AFFILIATED WITH PYRENE MANUACTURING COMPANY

GREATER VERSATILITY WITH "TRUMPET" QUADWAY FOG GUNS

Handle this new Quadway and you'll be convinced. Switch from a solid straight stream to a dense fog mist—or a combination of both to any varying degree—with just a flick of the wrist. It's well balanced and the easy-to-use trigger action control assures an absolute leak-proof shut-off.

Equally important—this new, all-purpose fog gun is made to the same precision standards and backed by the same guarantee that goes with all "Trumpet" Quadway Nozzles. Get the complete facts now, write direct or contact your own Wooster Brass representative.

Made for your standard booster lines in both low (up to 200 lbs.) and high (up to 800 lbs.) pressure. Available in chrome finish only.

HOSE BRASS GOODS WB LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

THE WOOSTER BRASS CO.
WOOSTER OHIO

MANUFACTURERS OF A COMPLETE LINE OF DISTINCTIVE FIRE FIGHTING EQUIPMENT

FIRE FIGHTING'S UP-TO-DATE IN KANSAS CITY

"The Kansas City Fire Patrol Department have used Shuredry Salvage Covers during the past thirty years. During that time many thousands of dollars involved in valuable stocks, merchandise, and machinery have been saved from water damage during fires, and sprinkler system operations."

SAYS CHIEF W. H. GARDNER, KANSAS CITY FIRE PATROL

FULTON *Shuredry* ON THE JOB

Shuredry Salvage Crews everywhere are saving fire victims thousands of dollars with Fulton's Shuredry Green-Bak Salvage Covers. Approved by National Board of Fire Underwriters and by Factory Mutual Laboratories, Fulton Shuredry tops every test for water penetration and seepage, is pliable and easy to handle. Specify *Shuredry* on your next order to your fire equipment dealer. ***Use Fulton Triple-strength Tarps of a 1,000 uses—for garbage truck covers and protection of equipment and supplies exposed to weather.***

Fulton BAG & COTTON MILLS

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"no parking" area in front of the firehouse on Harrison Ave. would get a summons. His action followed a recent general alarm at which time in order to get the apparatus out of the fire house several firemen and citizens had to push a parked out-of-town car out of the way. . . .

In Perth Amboy, N. J., July 12th, clouds of black smoke arising from a waste oil fire started by a refining company employees to train its workers in fire fighting attracted thousands of persons and jammed traffic in the area for half an hour. . . . In Brooklyn, N. Y., two building porters used a fire hose to rescue a window washer who dangled in the rain for 10 minutes outside a third floor window of a building after one side of his safety belt became loose. Neither fire hose nor window washer was injured. . . . Near Memphis, Tenn., a suspected moonshiner found the pursuit hot and dashed inside his house with a gallon jug. Not long after police captured the suspect but couldn't find the jug. Then an explosion in the stove set fire to the house—and the evidence was destroyed. . . . In Stoneham, Mass., two boys admitted setting six fires there recently. Three other boys were arrested as participants. . . . Firemen aided police and volunteers to rescue 18-year-old James Don Raymond of Albuquerque, N. M., after he was completely buried under three feet of dirt for more than 15 minutes. His head was fully covered for that time, but firemen worked for another half hour before completely freeing him. The youth was given oxygen by an inhalator squad and rushed to a hospital. . . . Massena, N. Y., firemen answered a call on the night of July 6th, to investigate smoke billowing from a clubhouse. They found a cigar smoking contest in progress (thanks to the many who contrib'd this item). . . . In Washington, D. C., Acting Battalion Chief Elmer Stein led a fleet of fire trucks in responding to an alarm. At the scene they found a refrigerator motor afire and quickly extinguished the blaze. The scene was Chief Stein's own home.

What's Burning

The following list includes fires of $10,000 loss and over in the United States and Canada for the month of August, 1950.

Month Ending August 31, 1950

Chicago, Ill.—Midwest Folding Products Co. destroyed.
Roselle, Ill.—Plt. of Nordic Wood Products Co. destroyed.
Tuscaloosa, Ala.—The Tuscaloosa Sun, newspaper plt., destroyed.
Jonesboro, Ark.—The McSwain Glass Co. plt. damaged.
Silvis, Ill.—Wooden overhead bridge of Rock Island Railroad, destroyed.
Gardiner, Mont.—Yellowstone Park Hotel destroyed.
Tacoma, Wash.—E. L. Hull Hardwood Floor Co. damaged.
Los Angeles, Cal.—Knudsen Co. plt. damaged. Ammonia compressor explosion.
Redding, Cal.—Don Hempstead Van and Storage Whse., south edge of Redding, damaged.
Bowling Green, Ky.—H. A. MacElroy Co. store destroyed.
Sardia, Miss.—D. B. Floyd Lumber Co. destroyed. Overheated boilers.
Lynbrook, L. I., N. Y.—Whse. of Lynbrook Household Appliance store, damaged. Spontaneous ignition.
Tillsonburg, Canada—Plt. of Corinth Cheese and Cream Co., destroyed.

Indianapolis, Ind.—Senn Corp. factory, television parts and hardware mfrs., destroyed. Exploding light bulb.
St. Paul, Minn.—Jewell Hotel destroyed.
Jamaica, N. Y.—Goldin Furriers, Bon Ton Dress Shop, Valencia Liquor Shop and six small stores damaged.
Dayton, Ohio—Cypress Bar and Restaurant, destroyed.
Edmond, Okla.—Elevator and two whses. of Farmers Grain Co., destroyed.
Phoenixville, Pa.—Barn on farm, Oldham Road, Charleston Township, 4 miles south, destroyed. Lightning.
Forrest City, Ark.—Arkansas Baking Co. plant destroyed.
Winnipeg, Man.—Mfg. bldg., occupied by seven firms, damaged.
Hayfork, Cal.—Moore Lumber Co. mill, Trinity county, destroyed.
Lawrence, Mass.—Apt. and business block, occupied by Franco-American War Veterans' Club, offices of Doctors John F. Collins and Carl Blotner, damaged.
High Bridge, N. J.—Taylor-Wharton Iron & Steel Corp. Foundry, damaged.
Wynnewood, Okla.—Five tanks of the Kerr McGee Refinery for crude oil, damaged. Escaping vapors from asphalt tanks.
Memphis, Tenn.—Whse., occupied by Cudahey Packing Co., damaged.
New Westminster, B. C.—800-foot assembly line and four small bldgs. in refrigeration plt. of Leeders Pacific, Ltd., damaged.
Colfax, Ill.—Restaurant of Willis Kessinger, two clothing stores of Harland and Stanley Clark and variety store of Lawrence Cook, destroyed.
New Orleans, La.—Wholesale paper plt. of Robins Sabins Paper Co., destroyed.
Nacogdoches, Tex.—Whse. of Stripling's Drug Store damaged.
San Carlos, Cal.—Corrugated iron bldg., occupied by Western Associated Chemical Co., Roberts and Grune Fire Equipment Co. and El Carmino Real Janitorial Supply Service, damaged. Arson suspected.
Osgood, Ind.—Osgood Industries Plt. destroyed.
Drummond Island, Mich.—Howard E. Somes furniture mfg. plt. destroyed.
Greenville, N. C.—The Dupree Bros. Genl. Store, Belvoir community of Pitt County, destroyed. Fire occurred during robbery by unknown bandit.
Roseburg, Ore.—Flegel Supply Co. destroyed.
Malvern, Pa.—Barn on farm of Mrs. James Gordon Fletcher, Willis Brook farm, at Sugartown, about four miles south, destroyed.
Spokane, Wash.—Boyd Conlee Feed whse. destroyed.
Portland, Ore.—Two million board feet lumber, Clark and Wilson Lumber mill, destroyed.
Chicago, Ill.—Business bldg. occupied by Public 5-and-10 cent store, M. Perlman drapery store, D. Reeder clothing store, J. Fagman haberdashery store, M. Steinlef toy store, damaged.
Fernley, Nev.—Garage and filling station, hotel, grocery store, barber shop, dwelling and part of bus depot, damaged.
Thorofare, N. J.—Truck body plt. of H. A. Dehart & Sons Co., damaged. Acetylene tank blew up.
Riverdale, N. D.—Klewit, Morrison & Knudsen Construction Co. barracks damaged.
Tacoma, Wash.—Plt. of Western Boat Bldg. Co. destroyed.
Amherstburg, Ont.—Main distillery of Calverts Ltd., destroyed. Explosion of alcohol vat.
Los Angeles, Cal.—Gun shop destroyed; adj. florist shop, beauty partlor, liquor store, dress shop and dry cleaning shop, damaged. Explosion of ammunition in gun shop.
Hialeah, Fla.—R. H. Hammond Milling Co., damaged.
Columbus, Ohio—Plt. of Chase Foundry & Mfg. Co. damaged.
Laredo, Tex.—Freight whse. owned by Missouri-Pacific Railroad, destroyed.
Somerville, Tex.—Santa Fe Railroad tie creosoting plt., damaged. Grass fire.
Philadelphia, Pa.—Bond Super Market damaged.
Laurel, Dela.—Whse. and offices of Southern States Cooperative, destroyed.
Haines City, Fla.—Former Frozen Food Products, Inc., plt., destroyed.
Des Moines, Ia.—One story brick storage bldg. and garage of Iowa Power and Light Co., destroyed. Explosion of acetylene gas tank.
Des Moines, Ia.—Thriftyway grocery store destroyed. Explosion.
Onawa, Ia.—Onawa Milling Co. feed mill destroyed. Started in grain driers.
Coquille, Ore.—Arago Cooperative cheese factory destroyed.
Portland, Ore.—Products Engineering Co. destroyed. Faulty oil line.
Primos, Pa.—Bldg. of Perlite Products Co. damaged.
Tacoma, Wash.—Woodbrook Riding Academy destroyed.
Saugus, Cal.—Bermite Powder Co. plt. destroyed. Flare up in flare packing machine.
East Lansing, Mich.—Quonset Village Cafeteria, Michigan State College Campus, destroyed. Lightning bolt.
Morganville, N. J.—Grammar school damaged.
Toccoa, Ga.—LeTourneau Hall, main bldg., of

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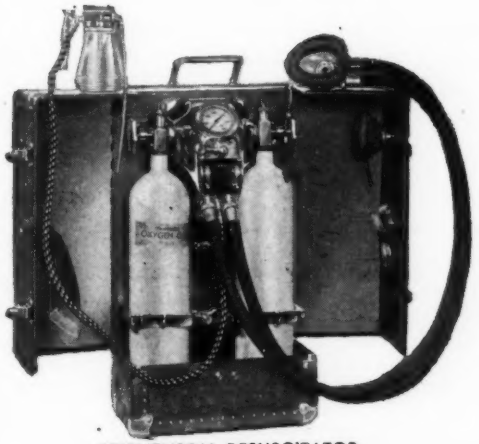

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Tocca Falls Schools, destroyed. Defective wiring.
Camden, N. J.—Olympic Restaurant, Modern Art Studio, Personality Shop, Shirt Box, M. A. Bruder Paint Store damaged.
Cincinnati, Ohio—Gulf Refining Co. plt., Hooven, damaged. Spark from truck.
Warren, Pa.—Barn and farm equip. at Rouse County Hospital destroyed.
Redding, Cal.—The Covington sawmill, Trinity Center, destroyed.
Grand Junction, Colo.—Bldg. of Color-Flabor Products cannery, Palisade, damaged.
Bowling Green, Ky.—The H. A. MacElroy chain store, destroyed.
Louisville, Ky.—A. Mengel Co., timber storage yd., damaged.
Hickory, N. C.—The Hickory Bench Co. plt. destroyed.
Philadelphia, Pa.—Kynett Methodist Episcopal Church damaged.
Pueblo, Col.—Whse. destroyed.
Bridgewater, Conn.—Barn, creamery and silo at Schaghticoke Farm, damaged.
Augusta, Ga.—Sawmill of Augusta Hardwood Co. destroyed.
Twin Falls, Ida.—Parisian Laundry damaged. Boiler explosion.
Litchfield, Ill.—Plt. of the Litchfield Clean Towel Service Co. damaged.
Louisville, Ky.—Large country dwelling of Dr. John Walker Moore, Blankenbaker Lane hilltop, destroyed.
Oklahoma City, Okla.—The Yentzer Brothers Furniture and Hardware store destroyed.
Springfield, Ill.—One-half dozen bldgs., three flattened bldgs., a doughnut shop, a cafe, a second hand store, damaged.
Redrock, Okla.—Barn on farm of Richard Schultz, 25,000 bales of hay, 3,000 creosoted poles, 10,000 bushels grain, destroyed. Current from relay line.
Kennett Square, Pa.—Barn on farm of Roland E. Sharpless, Londongrove, destroyed.
San Antonio, Tex.—Block of four one-story, frame duplex dwellings, destroyed.
Salt Lake City, Utah—Stratford Ward Chapel, Church of Jesus Christ of the Latter-Day Saints, destroyed.
Christopher, Ill.—Christopher High School damaged.
Lewiston, Me.—Motormart garage and six buses damaged.
South Warren, Maine.—Prison Farm, dairy barn, damaged. Short circuit caused by rain.
Juneau, Alaska.—Juneau Terminal Docks damaged.
Pendleton, Ore.—Temple grain elevator containing 28,000 bushels of wheat destroyed. Lightning.
Portland, Ore.—Whse. of Westinghouse Electric Supply Co. damaged.
Dallas, Tex.—Dragna's Food Market destroyed.
Hominy, Okla.—Baughman Lumber Co. destroyed.
Charleston, W. Va.—Central Glass Co. damaged.
Crystal Beach, Ont.—Lake Erie summer resort section damaged.
Fresno, Cal.—Oil processing plant, of Paraco Co. destroyed.
Sonora, Cal.—Bldgs. of Carson Gold Mining Corp. at Carson Hill and eight houses and school at Melones, damaged. Brush fire.
Emeryville, Cal.—Key Hotel damaged.
Massillon, Ohio.—One-story section of Ohio Drilling Co. plt. damaged.

Fire Makes News

The fire reporter, or other members of the staff of the Hartford, Conn., Courant, didn't have to go far for a piece of fire news on July 31. It all happened right in the Courant office.

At least there was smoke, plenty of it, and someone saw it from the street. It was coming from the roof of the Courant Building at 305 Broad Street. The discoverer ran to Florence and Howard Streets and turned in an alarm.

Before reporters at the newspaper had time to locate the fire, the apparatus had arrived, three engine companies and two ladder trucks, deputies and police cruisers.

They rushed to the upper stories where they found only the big vat of molten lead in the stereotype department, from the surface of the big pot the smoke was rising. Residue from melted type had risen to the surface and was giving off a heavy smoke.

The result: One run (for the firemen); no hits, no errors!

TOM MAGNER.

Fire Service Ladders

(*Continued from page 746*)

Not all ladder trucks or other fire apparatus carrying ladders in the fire service follow the beforementioned recommended specifications. In an effort to determine the range of ladders used by the fire service, and the particular lengths most widely used, FIRE ENGINEERING conducted a survey among a large group of representative fire departments.

The following data, taken from this survey, may prove interesting. It shows (a) the ladder classification (aerial, roof, etc.) (b) the various ladder lengths reported and (c) the most popularly used ladder in each classification.

ROOF LADDERS

Sizes reported used: 8-ft.; 10-ft.; 12-ft.; 15-ft; 16-ft.; 18-ft.; and 20-ft. (several departments reported extension roof ladders). Most widely used ladder: 12-ft.; next most widely used, 16-ft.

WALL LADDERS

Sizes reported used: 12-ft.; 14-ft.; 16-ft.; 18-ft.; 20 ft.; 24-ft.; 25-ft.; 28-ft.; 30-ft.; 32-ft.; 35-ft and 36-ft.

Most widely used ladders: 35-ft. Next most widely used: 24-ft.

EXTENSION LADDERS

Sizes reported used: 12-ft.; 16-ft.; 18-ft.; 20-ft.; 24-ft.; 28ft.; 35-ft.; 40-ft.; 45-ft.; 50-ft. 55-ft. 60-ft.; and 65-ft.

Most widely used ladder: 35-ft, 40-ft. and 50-ft. (tied for popularity) next most widely used: 24-ft.

AERIAL LADDERS

Sizes reported used: 65-ft.; 75-ft.; 85-ft.; 100-ft.

Most widely used ladders: 65-ft. and 85-ft.[4]

SCALING (POMPIER) LADDERS

Sizes reported used: 12-ft.; 16-ft.; and 20-ft.

Most widely used: 12-ft.

FOLDING LADDERS

Sizes reported used: 9-ft.; 10-ft.; 11-ft.; and 12-ft.

Most widely used: 10-ft.

[4]Since this study was made, and metal aerial ladders have shown a great increase, the 100-ft. aerial is finding wide preference.

Questions and Answers

Uncapped Standpipe

To the Editor:

A pumper is delivering water to a standpipe of a building under construction. The standpipe is uncapped at a point 100 feet above the street. A 50-foot section of 2½-inch hose equipped with a 1⅛-inch nozzle is connected to the standpipe outlet on the third floor (40 feet above the street).

The maximum pressure that the pumper can deliver at the nozzle on this line is most nearly (A) 26 psi; (B) 36 psi; (C) 56 psi; (D) 76 psi; (E) 86 psi. H. J. G.

Answer: Where a pumper is delivering water to a standpipe in a building under construction, and the standpipe is uncapped, the pressure at the top of the standpipe must always remain in the neighborhood

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of zero. At only 1 psi outlet pressure, an open 6-inch standpipe will discharge over 900 g.p.m. There might be a small friction loss in the line, which would increase, by a small amount, the pressure at points along the standpipe. However, this factor is negligible.

We must assume that the water is flowing from the top of the standpipe, and therefore the only pressure in the standpipe is that represented by the head of water in the standpipe above the connection from which the 50-foot line of 2½-inch hose is stretched.

Under these conditions, the pressure at the standpipe outlet feeding the line of hose would be that created by a 60-foot head of water, or approximately 26 pounds.

This pressure at the standpipe would give a pressure in the neighborhood of 21 pounds at the nozzle.

Therefore Answer "A" is correct, as it comes nearest to the correct answer.

When Clapper Valve Will Close

To the Editor:

Assume that an engine marked "A" is pumping through a line into a siamese and that an entire marked "B" is also pumping through a line into the same siamese. Of the following, the condition under which the clapper valve on the line from the second pumper is most likely to close, so that only Engine "A" will be delivering water through the siamese, is that the pressure at:

(A) Engine A exceeds the pressure at Engine B.

(B) The siamese is greater than the pressure at Engine A.

(C) Engine B exceeds the pressure at Engine A.

(D) The siamese pressure is greater than the pressure at Engine B.

(E) The siamese is equal to the pressure at Engine A. R. F. D.

Answer: "Answer D" is correct. The problem gives the pressure in the siamese connection. That is the only pressure that concerns us, as far as the standpipe system, hose lines, etc., connected to it are concerned. If the pressure at the siamese connection is greater than the pressure at Engine B, Engine B will deliver no water to the siamese connection; in fact, the reverse would be true if the clapper valve remained open. In other words, water would flow from the siamese connection to Engine B. However, the clapper valve would close under these conditions and therefore Statement D is correct. As noted above, the nozzle on the line attached to the standpipe has nothing to do with the problem whatsoever. As long as the pressure in the siamese is given, it is the only pressure we are concerned with.

Fog or High Tension Apparatus

To the Editor:

Would it be safe, or what degree of risk would be involved, in direct-

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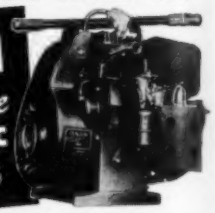

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ing water fog from a 2½-inch fire line on to a 40,000 KVA transformer, 154,000 volts?

E. A. B.

Answer: If a well formed fog is delivered by the nozzle, there should be no danger in directing it upon high voltage electrical apparatus.

As a matter of fact, one manufacturer produces a fog nozzle which they call "Poweron" fog nozzle. This is to be used on electrical fires in transformers, and other equipment, of whatever voltage.

Of course, the applicator, or fog nozzle, should be kept sufficiently far away from the energized equipment to prevent the possibility of arcing between the equipment and the nozzle.

The Public Service Company of New Jersey, who operate the utilities in that state, have placed fog nozzles in all substations for use on electrical fires. These have been used on fires involving transformers where the electric current has not been turned off. So far as we know, no accident has ever occurred to firemen in such operations.

Obituaries

Former Detroit Buff and Commissioner Dead

William J. Chittenden, Jr., resident manager of the Book Cadillac Hotel and dean of Detroit's hotel men, who for eleven years served as Fire Commissioner of that city, died of a heart ailment July 24, 1950.

Before and after his service as Commissioner, Mr. Chittenden devoted much of his time to the fire service. He was a charter member of Detroit's Box 12 Associates and through him the 'buffs' held their annual banquet at his hotel for years. After serving as Commissioner he never failed to participate in activities that would further the fire force.

Six Detroit Fire Department Battalion Chiefs served as pallbearers at his funeral and many firemen as well as 'buffs' paid their respects to "Bill," as he was affectionately known, while the body was lying in state in Hamilton Funeral Chapel. The funeral procession was routed past the Headquarters of the 4th Battalion which houses Engine 17 and Ladder 7, where the entire uniformed shift stood at attention.

Chief James Doughty of Sewickley Dies

James "Cliff" Doughty, 63, for nearly 20 years head of the Sewickley, Penn., Fire Department, died suddenly on July 22, 1950. Members of the Sewickley Fire Department and Allegheny County and Western Pennsylvania Firemen's Association conducted their own funeral services to honor the widely known and respected chief.

Chief Doughty served as a fire fighter for 24 years before being elected fire chief nearly 20 years ago. He instituted intensive training in his department and in World War II, when his force was depleted, he organized and drilled high school students as auxiliary fire fighters. He acted as civilian de-

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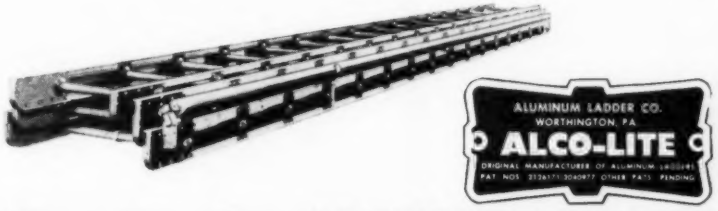

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fense coordinator for the area during that emergency.

He served for five years as president of the Fire Chiefs' Association of Allegheny County and, in addition, was a member of the International Association of Fire Chiefs, the Pennsylvania Firemen's Association and the Allegheny County Firemen's Association. He leaves a wife, four daughters, two sons, a sister and seven grandchildren.

Persons in the News

Deputy Chief E. F. McNally Retires

First Deputy Chief Edward F. McNally, a member of the Hartford, Conn., Fire Department for the past 42 years, retired from the service, effective August 1. Known and beloved by every fireman in that city, Chief McNally's career dates back to 1908 when he entered the Department as a callman.

He went through the ranks from the days of horse drawn vehicles, gas engines, mechanical aerial trucks and ladders, down to the present two-way radio communication system. He well remembers the days when "they just poured water" to the present scientific ways of fighting a fire.

Just before he turned in his badge to enjoy a well-deserved pension, Chief McNally recalled many of Hartford's biggest fires during the last half century.

"The Union Station fire was one of Hartford's greatest fires," Chief McNally related. "It occurred in February of 1914, and the snow was deep and the weather very cold. We had to take an out-of-the way route from Engine 4, where I was stationed, in order to reach the burning railroad station.

"In those days," Chief McNally said, "the firemen received $800 salary per year and worked 24 hours a day, and had one day off in every 10."

Chief McNally has served under eight fire chiefs. They were Chiefs Henry Eaton, Charles Krug, Augustus Loomis, John J. Moran, Michael A. Keena, Thomas L. Skelley, John C. King, and the present Hartford chief, Henry G. Thomas. TOM MAGNER.

Convention Dates

Sept. 19-20—IOWA FIREMEN'S ASSOCIATION. Annual convention and tournament, Council Bluffs, Ia. Secretary, Carl H. Fuchs, 2749 Kinsey Avenue, Des Moines 17, Ia.

Sept. 19-21—THE FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual meeting, Harrisburg, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 5-7—OHIO FIRE CHIEFS ASSOCIATION. Annual meeting, Youngstown, Ohio. Secretary-Treasurer, William H. Rosche, Assistant Chief, Canton Fire Department, Canton 2, Ohio.

Oct. 16-18—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Omaha, Neb. Secretary-Treasurer, Russell D. Salak, Schuyler, Neb.

Oct. 19-21—ILLINOIS FIREMEN'S ASSOCIATION. Annual meeting, Alton, Ill. Secretary, Chief Roy W. Alsip, Fire Headquarters, Champaign, Ill.

Oct. 26-27—CANADIAN FIRE CHIEFS CONFERENCE. University of Toronto, Toronto, Ont. For information contact William J. Scott, Provincial Fire Marshal, Toronto, Ont.

Oct. 28-29—NATIONAL FIREMEN'S ASSOCIATION. Second organizational meeting, Hotel William Penn, Pittsburgh, Pa. Secretary, Dale Hogg, 1431 Parkview Road, Lyndhurst 24, Ohio.

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ARGUSLITE CO.

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Chicago Ambulance Service

(*Continued from page* 741)

fire service. Captain McCarthy says such a plan excludes inexperienced firemen from being assigned to the ambulances. It follows that a 10-year veteran has had sufficient practical experience and training to make him better equipped to handle the many unpredictable emergencies that arise during the course of ambulance duty. The 10-year requirement also gives preference to firemen of merit and length of service. It also opens the way to firemen who no longer are able to undergo strenuous fire duty.

Before a man is assigned to an ambulance he must complete the standard and advanced American Red Cross first aid course. The course consists of 10 lessons of three hours duration for three weeks. Each ambulance man is required to attend a first aid refresher course once a year.

Particular emphasis is placed upon the control of bleeding, different types of wounds, artificial respiration, treatment of shock, and application of splints. Purpose of the course is to enable the firemen to hold the patient's injuries in check, to minimize them, and to handle and transport the victim carefully yet practically to the nearest hospital.

The first aid courses are held under the direction of Captain McCarthy and Drill Master James Furlong. All instruction is held at the Fire Department Drill School. A recent addition to the first aid program has been a short course in first aid to Chicago police rookies. Police recruits now must go through the first aid course at the fire department drill school before assignment to a police district.

This system has the advantage of acquainting policemen with first aid principles plus making them aware of the fire department ambulance service at their disposal when they come upon an accident case. All Chicago policemen now start out in the Traffic Division, so the benefits of this setup are increasingly of value.

Firemen assigned to the ambulances receive the regular firemen first class pay of $3,410 a year. So the salary cost for the ambulances amounts to $17,050 or $1,420 per month for each vehicle. Ambulance men are under the immediate orders of the Captain or Lieutenant in charge of the engine house in which they are quartered. And they must stand watch along with the other firemen.

All ambulances are dispatched from Chicago's two fire alarm offices, in the City Hall and the Englewood office at 6361 S. Wentworth Avenue. The City Hall office handles all alarms from 39th Street (Pershing Road) North and West to Chicago's city limits. The Englewood office handles alarms South and West of 39th Street to the city limits.

Prior to the placement of ambulances in fire houses, a survey was made to determine the sections of the city in which accidents are most prevalent. Captain McCarthy used this survey as a basis for determining where to place his ambulances, and which areas were in immediate need of service.

Another guiding factor in locating ambulances in firehouses was the belief that no emergency ambulance trip to the scene and to the hospital should require more than 10 minutes. Density of

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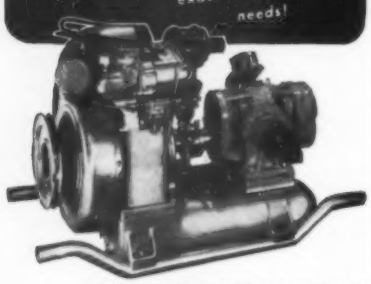

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ACCESSORIES, TOO! A complete line of hose, nozzles and other equipment and accessories used with portable pumpers. Ask for catalog.

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FIRE EQUIPMENT DIVISION
SEATTLE 1, WASHINGTON

population and industrial concentrations also were considered by Captain McCarthy when he placed the ambulances.

Chicago's 12 ambulances now in service are located at these engine houses:

1—Engine 1
2—Engine 12
3—Engine 114
4—Engine 50
5—Engine 62
6—Engine 78
7—Engine 108
8—Engine 123
9—Engine 46
10—Engine 95
11—Engine 27
12—Engine 118 (Airport)

Ambulance 12, while stationed at the Chicago Municipal Airport, responds to emergency calls in the area around the airport.

Ambulances are dispatched via the fire department's loudspeaker system.

A typical call sounds like this:

Loudspeaker: "Ambulance 4 . . . an accident at 47th and Cottage Grove . . ."

The call goes into Ambulance 4's quarters only.

The man on watch in the fire house repeats the location back to the fire alarm office. The call comes into the fire alarm office over a loudspeaker above the dispatcher's head.

The man on watch in Ambulance 4's quarters sounds the waker bell and at the same time taps Ambulance 4 out on special duty:

"3-3-4-1. . . . 8-1-4"

The signal means, "attention department, equipment responding to a special duty call." The 8-1-4 signal is Ambulance 4's code signature.

The fire alarm office meanwhile repeats the "3-3-4-1 . . . 8-1-4" signal to the remainder of the department and announces over the joker telephone where Ambulance 4 is going. The opposite fire alarm office, in this case the City Hall office, relays the message to stations in its half of the city.

It has been estimated that it takes an average of 25 seconds between the time the loudspeaker crackles and the time the ambulance rolls out of the front door. During night time, the push-off time of course takes slightly longer.

Upon arrival at the scene of the accident or other emergency, the ambulance driver and attendant apply tourniquets or compresses to open wounds, place splints, and then lift the victim onto a stretcher. The attendant rides in the back with the victim en route to the hospital and applies additional splints, tourniquets, compresses, or gives other first aid if needed.

There is room in the ambulances to carry two stretcher cases. Sometimes, however, more people are loaded into the ambulance. Ambulance 4, Chicago's busiest ambulance, which had 1,286 runs in 1949, one night was forced to load eight persons in the ambulance after a bad accident on Chicago's south side. Most of the victims were children.

Rules require that the ambulance driver take the injured person to the nearest American Medical Association Class A hospital.

And ambulance personnel are required to take the victim to a hospital even though it is quite apparent that the person is dead. At no time are the ambulance men allowed to assume that the victim is dead, no matter what condition the body is in.

Stretchers are equipped with a rubber sheet placed over the linen covering.

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Figure 114-B — one of many — made by pioneers in nozzle manufacture.

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Operated by Remote Control

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This makes it simple to clean the stretcher after the victim has been removed.

Despite the fact that responses by Chicago's ambulances are skyrocketing each year, the ambulances have been involved in only three accidents during the nearly five years they have been in service. And in none of these accidents was a fireman at fault.

In 1949, Chicago's ambulance's responded to 8,070 alarms. Captain McCarthy expects this figure to increase to between 10 and 11,000 runs in 1950. To show the increasing use made of Chicago's fire ambulance system, Captain McCarthy cites figures showing that Chicago ambulances in 1948 responded to 5,044 alarms. In 1949 they rolled to 3,026 more alarms than they did in 1948.

Of the 1949 figure of 8,070 responses, 7,890 were special duty calls and 180 were fires. An ambulance automatically responds to each 2-11 alarm fire in Chicago, or to fires when specially called.

The 12 ambulances in 1949 traveled a total of 47,711 miles and had a total working time of 5,691 hours and 58 minutes.

The ambulance responses are restricted to accidents where victims are sprawled upon the street or in public places. Ambulances do not respond to shootings or accidents in the home except in rare emergencies. Captain McCarthy stresses that his ambulance service is intended as an emergency service for Chicagoans and he refuses to tie up an ambulance in a case which can be handled more easily by the police or a private ambulance service.

Chicago's 13 rescue squads also supplement the work of the ambulances. The squads still have first call on all inhalator calls, but the ambulances respond when the squads are out on another alarm. It is not unusual for an engine, a hook and ladder, a squad, and a battalion to co-operate with the ambulance on one accident. The engine, truck, and squad extricate the victims and the ambulance transports them to the hospital.

Before an ambulance returns to its quarters the driver or the attendant telephones the fire alarm office to ask whether they might have another call for them to handle. Once the ambulance is back in its quarters it taps itself back in service (3-3-5 . . . 8-1-4 in the case of Ambulance 4) and the return is relayed to the rest of the department.

Of course there are many calls which turn out to be false alarms or nearly so. It has been estimated that one-third of the responses result in a "no service" report on the official entry. Sometimes there was a good reason for calling the ambulance. Perhaps the victim already was removed to the hospital when the ambulance arrived.

Upon completion of each run, the ambulance driver must write out an ambulance service report, giving the time of the run, the name of the person injured, and pertinent information about the victim. Also the nature of the accident and where it occurred is entered, plus the hospital where the victim was taken.

The report must also describe the type of first aid given and mention the police cars, officers, and their star numbers. The reports are forwarded daily to Captain McCarthy through official channels.

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Patented

- Dries fire clothing, too.
- Dries hose in a few hours.
- Protects and conditions hose.
- Saves space—fits in any corner.
- Keeps all hose ready for service.
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They are widely used in resorts, cabins, sawmills, farms, radio stations, camps, ranches and many other industrial and commercial enterprises.

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Please send full details about your power generating sets for portable or permanent service.
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The first of each month a report of the number of special duty calls, fire duty, mileage, and time worked must be submitted to Captain McCarthy at the Drill School.

One of Captain McCarthy's major problems in operating the ambulance service has been to acquaint the public with the availability of the ambulances.

Fortunately, the Chicago *Sun-Times* was one of the first newspapers to bring Chicago's lack of adequate emergency ambulance service to the attention of the public. Since the ambulances have been in service it has been the Chicago *Sun-Times*' policy to play up stories in which fire ambulances have aided in dramatic rescues. And the body of the story always includes the fire alarm office telephone number: (FI. 7-1313.)

"With quick presence of mind, Joe Doakes called the fire ambulance (FI. 7-1313)," is a typical way the news paper helps Captain McCarthy publicize the service.

The Captain also has persuaded other Chicago newspapers, both daily and neighborhood weeklies, plus radio stations to give publicity to the ambulances. Public and parochial school children also have been impressed with the availability of the ambulances, so they can carry the information home to their parents.

Letters from grateful citizens constantly pour into Chief Fire Marshal Anthony J. Mullaney's office thanking the department and commending the firemen for their quick and efficient service.

Some of the letters even are printed in the local newspapers, such as this one to the *Chicago Tribune*:

"At my telephone request, the fire department sent out Ambulance 1 to come to the assistance of an elderly lady who was injured in a bus accident this morning at Division and Wells Streets. In just three minutes the vehicle was at the accident scene. In less time than it takes to tell it, the firemen had removed her from the street onto a stretcher and into the ambulance, skillfully, efficiently, and carefully. . . ."

Much of Captain McCarthy's work in forming an efficient ambulance service in Chicago goes unrecognized. But the Chicago *Sun-Times*, had this to say in an editorial:

"Captain McCarthy . . . has done a swell job building up the (ambulance) service. He is as enthusiastic about saving lives of his fellow Americans as he was in blasting Japs. . .

"Mayor Kennelley (has) cited McCarthy as an example of vets who came back from the battlefields and pitched in to make their states and cities better places in which to live. There are lots of other heroes like Joe (McCarthy) who also deserve praise in high places. But part of being a hero is the ability to carry on without praise and public honor."

Locomotive Plant Fire

(*Continued from page* 739)

the damages were remarkably light and mostly confined to fire-spread in the inflammable roof construction and essential cutting away on the roofs of premises "D" to "K" that were very seriously threatened when the Brigades got to work. Although the firemen ran considerable risks and took much punishment aloft in surrounding such a fast-travelling outbreak, only one sustained an injury (burning ember in right eye) and even this was not so serious as to require his detention in hospital.

In the section of the Chief Fire Officer's report which deals with "behaviour of structure," his comment about the cast iron columns, which are such a well-known feature of commercial and industrial structures of the Victorian era, are of special interest:

"Owing to the large area of unprotected timber flooring and roofing, an early collapse of room and floors occurred. This was not aided by the presence of cast iron columns which, in the main, withstood the intense heat without fracture or collapse. The brick walls, in themselves load bearing, also withstood the effects of fire and collapse of roof and floors extremely well."

Mention must also be made of one factor that might have had an effect on the progress of this fire. There is only one point of access for appliances, which means a detour of practically a mile and then a long and torturous journey back into the works over hundreds of railway lines. No direct route can be predetermined as according to shunting operations so is the route to any specific point determined. This is, of course, in addition to normal main-line traffic.

It was at four minutes past midnight when the last Fire Brigade appliance returned to station from the outbreak, which, as previously stated, was discovered at 12:24 p.m. and under control by 4:37 p.m. It is pleasing to record that, despite the magnitude of the operation, there was not a single failure of pumping appliances, and of the 162 x 75 ft. lengths of hose used, only six required to be replaced on the fire ground.

A few hours later, at the Jury Street headquarters, Mr. S. H. Charters carried out his inspection of Derby Fire Brigade. The large attendance of personnel showed little, if any, trace of their arduous fight of the previous day, or of their strenuous preparations of the battle-stained appliances for inspection standard. It is no wonder that the Home Office Inspector, with his first-hand knowledge of the operations at the locomotive works, said in the course of his address: "I congratulate you. Your smart turn-out, particularly after yesterday, is a credit to Derby and to you."

Councillor T. Dennis, chairman of the Borough Fire Brigade Committee, also paid a well-deserved tribute to the assistance which the Brigade received from Derbyshire county and British Railways' Fire Services.

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One '42 Navy Surplus Seagrave, good condition, fully equipped, has 750-1000 lb. pump, $1950.

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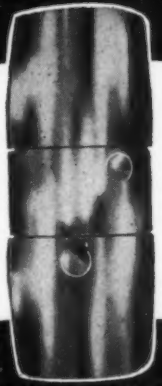

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WEST COAST REPRESENTATIVE:
W. D. RIGDON
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Humboldt Has $500,000 Fire

Seven business houses were completely destroyed, four others badly damaged by fire and water, a 375-foot fruit shed and five refrigerator freight cars and flat cars loaded with lumber were burned, together with a 50,000-gallon water tank, in Humboldt, Tenn., early in July, 1950.

The fire, which was attributed to a match tossed onto a pile of paper by a group of boys near one of the fruit and vegetable sheds of the Louisville & Nashville Railroad, spread over creosoted timber of the long shed, caused an explosion of a barrel of waxing compound, and required more than two hours of strenuous effort before it was controlled by Humboldt firemen, aided by forces from Milan, Trenton, Jackson, Bells and Brownsville.

The fire was beyond control before Humboldt firemen had stretched their first line, it is reported, and the flames spread rapidly in the creosote-lumber of the large shed after which it communicated across Front street to the business houses.

On the eastern flank, the fire was finally stopped at an alley. Another alley aided fire fighters to stem the advance of the flames to the south. For a while the entire "Crossing" business section was threatened. The Crossing district is the market place for fruits and vegetables in the city of 7,000 population.

One fireman, Earl Criss, of Humboldt, was injured during the struggle.

Tennessee highway patrolmen were called in to help local police regulate traffic and control the curious. The communities of Camden and McKenzie offered fire equipment, but this was not needed. The property loss was estimated at $500,000, of which $250,000 was suffered by the L & N Railroad.

R. H. DAVIDSON

Washington to Have Fifth Colored Fire Company

Creation of a fifth Negro company in the District of Columbia Fire Department was approved in June by District Commissioners. The action, however, like the creation of 40 new positions in the Department, recently requested, is contingent upon final Congressional and White House approval of the proposed 60-hour week for firemen, according to Fire Chief Joseph A. Mayhew.

In a report to the Commissioners, Chief Mayhew had said the four existing Negro companies were overmanned and that a list of 146 privates to be hired for 60-hour-week will probably include 23 Negroes. In his report he asked permission to set up a new company "in order to continue the established departmental policy." The policy had been to segregate white and Negro firemen, according to the Chief, who stated the new company will be established at No. 13 Engine, 942 G street, SW, now manned by white firemen. A white captain will be in command, it is said, with a Negro lieutenant commanding the second platoon.

Two of the existing Negro companies have white officers, the others are commanded by Negroes. The Negro companies now in service are: Engine 4, Engine 7, Ladder 10 and Engine 27. The department consists of 30 engine, 15 ladder companies and two rescue squads.

—IRVING JOHNSON

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(F. E. Boren, Chief, Fire Dept., Silver City, N. M.)

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...it gets into action immediately, then helps me get to the source of a fire quickly and safely. Keeps me comfortable and confident while I'm working under tough breathing conditions. And I sure like the supply of cool, refreshing *air* it gives me. It keeps me pepped up even when the going is rugged."

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FIRE ENGINEERING

SEPTEMBER, 1950

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